



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL  
HIGHLAND COUNTY**

**CERTIFIED MAIL**

Street Address:

122 S. Front Street

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

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049

**Application No: 05-13731**

**Fac ID: 0536000020**

**DATE: 7/19/2005**

Candle-Lite  
Ken Cassidy  
37 West Broad Street  
Columbus, OH 43215

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

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

Sincerely,

*Michael W. Ahern*

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

CC: USEPA

SWDO



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**Permit To Install  
Terms and Conditions**

**Issue Date: 7/19/2005  
Effective Date: 7/19/2005**

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**FINAL PERMIT TO INSTALL 05-13731**

Application Number: 05-13731  
Facility ID: 0536000020  
Permit Fee: **\$13200**  
Name of Facility: Candle-Lite  
Person to Contact: Ken Cassidy  
Address: 37 West Broad Street  
Columbus, OH 43215

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**250 Eastern Avenue  
Leesburg, Ohio**

Description of proposed emissions unit(s):  
**Modification to 10 Prilling Towers, and 17 Prilling Drums to improve emission factors and increase short term allowable limits.**

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

**Candle-Lite**  
**PTI Application: 05-13731**  
**Issued: 7/19/2005**

**Facility ID: 053600002**

## **Part I - GENERAL TERMS AND CONDITIONS**

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

#### **1. Compliance Requirements**

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

#### **2. Reporting Requirements**

The permittee shall submit required reports in the following manner:

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

#### **3. Records Retention Requirements**

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

#### **4. Inspections and Information Requests**

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

**Candle-Lite****PTI Application: 05-13731****Issued: 7/19/2005****Facility ID: 053600002**

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

**5. Scheduled Maintenance/Malfunction Reporting**

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

**6. Permit Transfers**

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

**7. Air Pollution Nuisance**

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

**8. Termination of Permit to Install**

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

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

**Candle-Lite****PTI Application: 05-13731****Issued: 7/19/2005****Facility ID: 053600002**

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

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

**10. Public Disclosure**

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

**11. Applicability**

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

**12. Best Available Technology**

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

**Candle-Lite**

**PTI Application: 05-13731**

**Issued: 7/19/2005**

**Facility ID: 053600002**

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

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this

Emissions Unit ID: P003

permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

**14. Construction Compliance Certification**

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

**15. Fees**

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

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

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC	64.00
PE	35.35

Candle-Lite  
PTI Application: 05 12724  
Issue

Facility ID: 053600002

Emissions Unit ID: P003

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P003 - Prill Tower 4 - modification (this PTI replaces PTI 05-11120)	OAC rule 3745-31-05(A)	OAC rule 3745-17-07(A)(1)
		OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)	
	OAC rule 3745-17-11(B)	

**Candl**  
**PTI A**  
**Issued: 7/19/2005**

Emissions Unit ID: **P003**

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.2 pound per hour and 0.96 ton per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 0.6 pound per hour and 2.44 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant

to OAC rule 3745-31-05(A)(3).

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

## 2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

## B. Operational Restrictions

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 10 percent by weight (of wax mix) for this emissions unit.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$Er = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

$$i=1$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.1)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the color of the emissions;
  - b. the cause of the visible emissions;
  - c. the total duration of any visible emission incident; and
  - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

#### D. Reporting Requirements

- 1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:

**Candle-Lite****PTI Application: 05 12724****Issue****Facility ID: 053600002****Emissions Unit ID: P003**

- a. the fragrance concentration limitation of 10%, by weight;
- b. the rolling, 365-day VOC emission limitation from P003 through P008, P010, P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

## **E. Testing Requirements**

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

1. Emission Limitation:

0.2 lb PE/hr and 0.96 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PEr = (P)*(EF)*(1 - CE)$$

where,

PEr = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (1,100 lbs wax /hr, 9,636,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.01 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

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**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P003**

2. Emission Limitation:

0.6 lb VOC/hr and 2.44 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$E_r = (P) * [(-5.1 \text{ EE }^{-7}) * (F * 100)^2 + (5.554 \text{ EE }^{-5}) * (F * 100) + (1.5 \text{ EE }^{-6})]$$

where,

$E_r$  = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

$P$  = the maximum process weight rate (1,100 lbs wax /hr, 9,636,000 lbs wax/yr)

$EE$  = notation directing the user to multiply the preceding number by 10 to the power of the following number

$F$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.10)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

**Candle-Lite**

**PTI Application: 05 12721**

**Issue**

**Facility ID: 053600002**

**Emissions Unit ID: P003**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**Candl****PTI A****Issued: 7/19/2005**Emissions Unit ID: **P004****F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P004 - Prill Tower 1 - modification (this PTI replaces PTI 05-11387)	OAC rule 3745-31-05(A)  OAC rule 3745-17-07(A)(1)  OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

**Candl**  
**PTI A**  
**Issued: 7/19/2005**

Emissions Unit ID: **P004**

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.2 pound per hour and 0.96 ton per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 0.6 pound per hour and 2.44 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant

to OAC rule 3745-31-05(A)(3).

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

## 2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

## B. Operational Restrictions

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 10 percent by weight (of wax mix) for this emissions unit.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$Er = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

$$i=1$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.1)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

#### D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;
  - b. the rolling, 365-day VOC emission limitation from P003 through P008, P010,

P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

- 2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

**E. Testing Requirements**

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

- 1. Emission Limitation:

0.2 lb PE/hr and 0.96 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PEr = (P)*(EF)*(1 - CE)$$

where,

PEr = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (1,100 lbs wax /hr, 9,636,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.01 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

- 2. Emission Limitation:

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**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P004**

0.6 lb VOC/hr and 2.44 tons VOC/yr

**Candle-Lite****PTI Application: 05 12721****Issue****Facility ID: 053600002****Emissions Unit ID: P004**

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$E_r = (P) * [(-5.1 \text{ EE } -7) * (F * 100)^2 + (5.554 \text{ EE } -5) * (F * 100) + (1.5 \text{ EE } -6)]$$

where,

Er = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (1,100 lbs wax /hr, 9,636,000 lbs wax/yr)

EE = notation directing the user to multiply the preceding number by 10 to the power of the following number

F = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.10)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

## 3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

## 4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

## 5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

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**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P004**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**Candl****PTI A****Issued: 7/19/2005**Emissions Unit ID: **P004****F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P005 - Prill Tower 2 - modification (this PTI replaces PTI 05-11387)	OAC rule 3745-31-05(A)
	OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

**Candl****PTI A****Issued: 7/19/2005**Emissions Unit ID: **P005**

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.2 pound per hour and 0.96 ton per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 0.6 pound per hour and 2.44 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant

to OAC rule 3745-31-05(A)(3).

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

## 2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

## B. Operational Restrictions

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 10 percent by weight (of wax mix) for this emissions unit.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$Er = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

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$$i=1$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.1)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

#### **D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;
  - b. the rolling, 365-day VOC emission limitation from P003 through P008, P010,

P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

#### **E. Testing Requirements**

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

1. Emission Limitation:

0.2 lb PE/hr and 0.96 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PE_r = (P) \cdot (EF) \cdot (1 - CE)$$

where,

PE<sub>r</sub> = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (1,100 lbs wax /hr, 9,636,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.01 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

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**Emissions Unit ID: P005**

0.6 lb VOC/hr and 2.44 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$E_r = (P) * [(- 5.1 \text{ EE }^{-7}) * (F * 100)^2 + (5.554 \text{ EE }^{-5}) * (F * 100) + (1.5 \text{ EE }^{-6})]$$

where,

$E_r$  = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

$P$  = the maximum process weight rate (1,100 lbs wax /hr, 9,636,000 lbs wax/yr)

$EE$  = notation directing the user to multiply the preceding number by 10 to the power of the following number

$F$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.10)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**Candl****PTI A****Issued: 7/19/2005**Emissions Unit ID: **P005****F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

**Candl**  
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**Issued: 7/19/2005**

Emissions Unit ID: **P006**

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P006 - Prill Tower 3 - modification (this PTI replaces PTI 05-11387)	OAC rule 3745-31-05(A)  OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

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Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.2 pound per hour and 0.96 ton per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 0.6 pound per hour and 2.44 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

The emissions limitation specified by this rule is less stringent than the emissions

limitation established pursuant to OAC rule 3745-31-05(A)(3).

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

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Facility ID: 053600002

Emissions Unit ID: P006

**2. Additional Terms and Conditions**

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

**B. Operational Restrictions**

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 10 percent by weight (of wax mix) for this emissions unit.

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

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$E_r = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.1)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

#### D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;
  - b. the rolling, 365-day VOC emission limitation from P003 through P008, P010,

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P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

## **E. Testing Requirements**

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

1. Emission Limitation:

0.2 lb PE/hr and 0.96 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PE_r = (P) \cdot (EF) \cdot (1 - CE)$$

where,

PE<sub>r</sub> = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (1,100 lbs wax /hr, 9,636,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.01 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

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Emissions Unit ID: **P006**

0.6 lb VOC/hr and 2.44 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$E_r = (P) * [(-5.1 \text{ EE }^{-7}) * (F * 100)^2 + (5.554 \text{ EE }^{-5}) * (F * 100) + (1.5 \text{ EE }^{-6})]$$

where,

$E_r$  = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

$P$  = the maximum process weight rate (1,100 lbs wax /hr, 9,636,000 lbs wax/yr)

$EE$  = notation directing the user to multiply the preceding number by 10 to the power of the following number

$F$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.10)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

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Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**Candl****PTI A****Issued: 7/19/2005**Emissions Unit ID: **P006****F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P007 - Prill Tower 5 - modification (this PTI replaces PTI 05-11120)	OAC rule 3745-31-05(A)
	OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

**Candle-Lite**

**PTI Application: 05 12721**

**Issue**

**Facility ID: 053600002**

**Emissions Unit ID: P007**

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.2 pound per hour and 0.96 ton per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 0.6 pound per hour and 2.44 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

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

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

## 2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

## B. Operational Restrictions

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 10 percent by weight (of wax mix) for this emissions unit.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$Er = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

$$i=1$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.1)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the color of the emissions;
  - b. the cause of the visible emissions;
  - c. the total duration of any visible emission incident; and
  - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

#### D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;

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- b. the rolling, 365-day VOC emission limitation from P003 through P008, P010, P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

## **E. Testing Requirements**

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

1. Emission Limitation:

0.2 lb PE/hr and 0.96 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PE_r = (P) \cdot (EF) \cdot (1 - CE)$$

where,

PE<sub>r</sub> = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (1,100 lbs wax /hr, 9,636,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.01 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

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Emissions Unit ID: **P007**

0.6 lb VOC/hr and 2.44 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$E_r = (P) * [(-5.1 \text{ EE }^{-7}) * (F * 100)^2 + (5.554 \text{ EE }^{-5}) * (F * 100) + (1.5 \text{ EE }^{-6})]$$

where,

$E_r$  = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

$P$  = the maximum process weight rate (1,100 lbs wax /hr, 9,636,000 lbs wax/yr)

$EE$  = notation directing the user to multiply the preceding number by 10 to the power of the following number

$F$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.10)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

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Emissions Unit ID: **P007**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

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Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P008 - Prill Tower 6 - modification (this PTI replaces PTI 05-11120)	OAC rule 3745-31-05(A)
	OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

**Candl****PTI A****Issued: 7/19/2005**Emissions Unit ID: **P008**

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.2 pound per hour and 0.96 ton per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 0.6 pound per hour and 2.44 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant

to OAC rule 3745-31-05(A)(3).

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

## 2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

## B. Operational Restrictions

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 10 percent by weight (of wax mix) for this emissions unit.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$Er = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

$$i=1$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.1)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

#### D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;
  - b. the rolling, 365-day VOC emission limitation from P003 through P008, P010,

P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

#### **E. Testing Requirements**

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

1. Emission Limitation:

0.2 lb PE/hr and 0.96 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PE_r = (P) \cdot (EF) \cdot (1 - CE)$$

where,

PE<sub>r</sub> = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (1,100 lbs wax /hr, 9,636,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.01 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

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**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P008**

0.6 lb VOC/hr and 2.44 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$E_r = (P) * [(-5.1 \text{ EE }^{-7}) * (F * 100)^2 + (5.554 \text{ EE }^{-5}) * (F * 100) + (1.5 \text{ EE }^{-6})]$$

where,

$E_r$  = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

$P$  = the maximum process weight rate (1,100 lbs wax /hr, 9,636,000 lbs wax/yr)

$EE$  = notation directing the user to multiply the preceding number by 10 to the power of the following number

$F$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.10)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

**Candle-Lite**

**PTI Application: 05 12721**

**Issue**

**Facility ID: 053600002**

**Emissions Unit ID: P008**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P010 - Prill Tower 7 - modification (this PTI replaces PTI 05-11120)	OAC rule 3745-31-05(A)  OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P010**

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.2 pound per hour and 0.96 ton per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 0.6 pound per hour and 2.44 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant

to OAC rule 3745-31-05(A)(3).

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

## 2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

## B. Operational Restrictions

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 10 percent by weight (of wax mix) for this emissions unit.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$Er = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

$$i=1$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.1)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

## D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;
  - b. the rolling, 365-day VOC emission limitation from P003 through P008, P010,

P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

#### **E. Testing Requirements**

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

1. Emission Limitation:

0.2 lb PE/hr and 0.96 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PE_r = (P) \cdot (EF) \cdot (1 - CE)$$

where,

PE<sub>r</sub> = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (1,100 lbs wax /hr, 9,636,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.01 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

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**Candle-Lite**

**PTI Application: 05 12721**

**Issue**

**Facility ID: 053600002**

**Emissions Unit ID: P010**

0.6 lb VOC/hr and 2.44 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$E_r = (P) * [(-5.1 \text{ EE }^{-7}) * (F * 100)^2 + (5.554 \text{ EE }^{-5}) * (F * 100) + (1.5 \text{ EE }^{-6})]$$

where,

$E_r$  = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

$P$  = the maximum process weight rate (1,100 lbs wax /hr, 9,636,000 lbs wax/yr)

$EE$  = notation directing the user to multiply the preceding number by 10 to the power of the following number

$F$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.10)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P010**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

**Candl**  
**PTI A**  
**Issued: 7/19/2005**

Emissions Unit ID: **P011**

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P011 - Prill Drum 15 - modification (this PTI replaces PTI 05-11390)	OAC rule 3745-31-05(A)  OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

**Candl****PTI A****Issued: 7/19/2005**Emissions Unit ID: **P011**

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.03 pound per hour and 0.13 ton per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 0.2 pound per hour and 0.67 ton per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

The emissions limitation specified by this rule is less stringent than the emissions

limitation established pursuant to OAC rule 3745-31-05(A)(3).

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

Candle-Lite

PTI Application: 05 12721

Issue

Facility ID: 053600002

Emissions Unit ID: P011

**2. Additional Terms and Conditions**

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

**B. Operational Restrictions**

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 10 percent by weight (of wax mix) for this emissions unit.

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

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$E_r = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.1)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

#### D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;
  - b. the rolling, 365-day VOC emission limitation from P003 through P008, P010,

P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

#### **E. Testing Requirements**

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

1. Emission Limitation:

0.03 lb PE/hr and 0.13 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PE_r = (P) \cdot (EF) \cdot (1 - CE)$$

where,

PE<sub>r</sub> = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (300 lbs wax /hr, 2,628,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.005 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

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**Candle-Lite**

**PTI Application: 05 12721**

**Issue**

**Facility ID: 053600002**

**Emissions Unit ID: P011**

0.2 lb VOC/hr and 0.67 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$Er = (P) * [(-5.1 \text{ EE } -7) * (F * 100)^2 + (5.554 \text{ EE } -5) * (F * 100) + (1.5 \text{ EE } -6)]$$

where,

Er = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (300 lbs wax /hr, 2,628,000 lbs wax/yr)

EE = notation directing the user to multiply the preceding number by 10 to the power of the following number

F = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.10)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

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**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P011**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**Candl****PTI A****Issued: 7/19/2005**Emissions Unit ID: **P012****F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

**Candl**  
**PTI A**  
**Issued: 7/19/2005**

Emissions Unit ID: **P012**

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P012 - Prill Drum 16 - modification (this PTI replaces PTI 05-11390)	OAC rule 3745-31-05(A)	OAC rule 3745-17-07(A)(1)
		OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)	
	OAC rule 3745-17-11(B)	

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.4 pound per hour and 1.69 tons per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 1.6 pound per hour and 6.97 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

The emissions limitation specified by this rule is less stringent than the emissions

limitation established pursuant to OAC rule 3745-31-05(A)(3).

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

**2. Additional Terms and Conditions**

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

**B. Operational Restrictions**

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 8 percent by weight (of wax mix) for this emissions unit.

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

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$E_r = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

#### D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;
  - b. the rolling, 365-day VOC emission limitation from P003 through P008, P010,

**Candle-Lite****PTI Application: 05 12721****Issue****Facility ID: 053600002****Emissions Unit ID: P012**

P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

### **E. Testing Requirements**

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

1. Emission Limitation:

0.4 lb PE/hr and 1.69 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PE_r = (P) \cdot (EF) \cdot (1 - CE)$$

where,

PE<sub>r</sub> = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.005 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

85

**Candl**

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Emissions Unit ID: **P012**

1.6 lb VOC/hr and 6.97 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$E_r = (P) * [(-5.1 \text{ EE }^{-7}) * (F * 100)^2 + (5.554 \text{ EE }^{-5}) * (F * 100) + (1.5 \text{ EE }^{-6})]$$

where,

$E_r$  = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

$P$  = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

$EE$  = notation directing the user to multiply the preceding number by 10 to the power of the following number

$F$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

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**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P012**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**Candl****PTI A****Issued: 7/19/2005**Emissions Unit ID: **P012****F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

**Candl**  
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**Issued: 7/19/2005**

Emissions Unit ID: **P014**

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P014 - Prill Drum 1 - modification (this PTI replaces PTI 05-11391)	OAC rule 3745-31-05(A)  OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

**Candle-Lite**

PTI Application: 05 12724

**Issue**

Facility ID: 053600002

Emissions Unit ID: P014

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.2 pound per hour and 0.88 ton per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 1.0 pound per hour and 4.43 ton per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

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

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

## 2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

## B. Operational Restrictions

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 10 percent by weight (of wax mix) for this emissions unit.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$Er = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

$$i=1$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.1)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

#### D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;

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- b. the rolling, 365-day VOC emission limitation from P003 through P008, P010, P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

## **E. Testing Requirements**

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

1. Emission Limitation:

0.2 lb PE/hr and 0.88 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PE_r = (P) \cdot (EF) \cdot (1 - CE)$$

where,

PE<sub>r</sub> = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (2,000 lbs wax /hr, 17,520,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.005 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

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**Issued: 7/19/2005**

Emissions Unit ID: **P014**

1.0 lb VOC/hr and 4.43 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$Er = (P) * [(-5.1 \text{ EE }^{-7}) * (F * 100)^2 + (5.554 \text{ EE }^{-5}) * (F * 100) + (1.5 \text{ EE }^{-6})]$$

where,

Er = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (2,000 lbs wax /hr, 17,520,000 lbs wax/yr)

EE = notation directing the user to multiply the preceding number by 10 to the power of the following number

F = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.10)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

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**Issued: 7/19/2005**

Emissions Unit ID: **P014**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**Candle-Lite****PTI Application: 05 12724****Issue:****Facility ID: 053600002****Emissions Unit ID: P014****F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P015 - Prill Drum 2 - modification (this PTI replaces PTI 05-11391)	OAC rule 3745-31-05(A)
	OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

**Candl**  
**PTI A**  
**Issued: 7/19/2005**

Emissions Unit ID: **P015**

Applicable Emissions  
 Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.3 pound per hour and 1.10 ton per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 1.3 pound per hour and 5.54 ton per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant

to OAC rule 3745-31-05(A)(3).

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

## 2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

## B. Operational Restrictions

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 10 percent by weight (of wax mix) for this emissions unit.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$E_r = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

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$$i=1$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.1)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

#### **D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;
  - b. the rolling, 365-day VOC emission limitation from P003 through P008, P010,

P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

#### **E. Testing Requirements**

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

1. Emission Limitation:

0.3 lb PE/hr and 1.10 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PE_r = (P) \cdot (EF) \cdot (1 - CE)$$

where,

PE<sub>r</sub> = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (2,500 lbs wax /hr, 21,900,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.005 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

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Emissions Unit ID: **P015**

1.3 lb VOC/hr and 5.54 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$Er = (P) * [(-5.1 \text{ EE } -7) * (F * 100)^2 + (5.554 \text{ EE } -5) * (F * 100) + (1.5 \text{ EE } -6)]$$

where,

Er = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (2,500 lbs wax /hr, 21,900,000 lbs wax/yr)

EE = notation directing the user to multiply the preceding number by 10 to the power of the following number

F = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.10)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

**Candle-Lite**

**PTI Application: 05 12721**

**Issue**

**Facility ID: 053600002**

**Emissions Unit ID: P015**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**Candl****PTI A****Issued: 7/19/2005**Emissions Unit ID: **P015****F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P016 - Prill Drum 3 - modification (this PTI replaces PTI 05-11391)	OAC rule 3745-31-05(A)  OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P016**

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.4 pound per hour and 1.69 ton per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 1.6 pound per hour and 6.97 ton per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant

to OAC rule 3745-31-05(A)(3).

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

## 2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

## B. Operational Restrictions

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 8.0 percent by weight (of wax mix) for this emissions unit.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$Er = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

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$$i=1$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

## **D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 8%, by weight;
  - b. the rolling, 365-day VOC emission limitation from P003 through P008, P010,

P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

#### **E. Testing Requirements**

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

1. Emission Limitation:

0.4 lb PE/hr and 1.69 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PE_r = (P) \cdot (EF) \cdot (1 - CE)$$

where,

PE<sub>r</sub> = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.005 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

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**PTI Application: 05 12724**

**Issue**

**Facility ID: 053600002**

**Emissions Unit ID: P016**

1.6 lb VOC/hr and 6.97 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$E_r = (P) * [(-5.1 \text{ EE }^{-7}) * (F * 100)^2 + (5.554 \text{ EE }^{-5}) * (F * 100) + (1.5 \text{ EE }^{-6})]$$

where,

$E_r$  = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

$P$  = the maximum process weight rate (3850 lbs wax /hr, 33,726,000 lbs wax/yr)

$EE$  = notation directing the user to multiply the preceding number by 10 to the power of the following number

$F$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

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**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P016**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**Candl****PTI A****Issued: 7/19/2005**Emissions Unit ID: **P016****F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P017 - Prill Drum 4 - modification (this PTI replaces PTI 05-11391)	OAC rule 3745-31-05(A)  OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

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Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.4 pound per hour and 1.69 tons per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 1.6 pound per hour and 6.97 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

The emissions limitation specified by this rule is less stringent than the emissions

limitation established pursuant to OAC rule 3745-31-05(A)(3).

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

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Issue

Facility ID: 053600002

Emissions Unit ID: P017

**2. Additional Terms and Conditions**

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

**B. Operational Restrictions**

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 8 percent by weight (of wax mix) for this emissions unit.

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

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$E_r = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

#### **D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;
  - b. the rolling, 365-day VOC emission limitation from P003 through P008, P010,

P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

#### **E. Testing Requirements**

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

1. Emission Limitation:

0.4 lb PE/hr and 1.69 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PE_r = (P) \cdot (EF) \cdot (1 - CE)$$

where,

PE<sub>r</sub> = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.005 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

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**Issue**

**Facility ID: 053600002**

**Emissions Unit ID: P017**

1.6 lb VOC/hr and 6.97 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$E_r = (P) * [(-5.1 \text{ EE }^{-7}) * (F * 100)^2 + (5.554 \text{ EE }^{-5}) * (F * 100) + (1.5 \text{ EE }^{-6})]$$

where,

$E_r$  = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

$P$  = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

$EE$  = notation directing the user to multiply the preceding number by 10 to the power of the following number

$F$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

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**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P017**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**Candl****PTI A****Issued: 7/19/2005**Emissions Unit ID: **P017****F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P018 - Prill Drum 5 - modification (this PTI replaces PTI 05-11391)	OAC rule 3745-31-05(A)
	OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P018**

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.4 pound per hour and 1.69 tons per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 1.6 pound per hour and 6.97 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

The emissions limitation specified by this rule is less stringent than the emissions

limitation established pursuant to OAC rule 3745-31-05(A)(3).

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

Candle-Lite

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Issue

Facility ID: 053600002

Emissions Unit ID: P018

**2. Additional Terms and Conditions**

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

**B. Operational Restrictions**

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 8 percent by weight (of wax mix) for this emissions unit.

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

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$E_r = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

#### **D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;
  - b. the rolling, 365-day VOC emission limitation from P003 through P008, P010,

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P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

### **E. Testing Requirements**

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

1. Emission Limitation:

0.4 lb PE/hr and 1.69 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PE_r = (P) \cdot (EF) \cdot (1 - CE)$$

where,

PE<sub>r</sub> = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.005 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

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**Candl**

**PTI A**

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Emissions Unit ID: **P018**

1.6 lb VOC/hr and 6.97 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$E_r = (P) * [(-5.1 \text{ EE }^{-7}) * (F * 100)^2 + (5.554 \text{ EE }^{-5}) * (F * 100) + (1.5 \text{ EE }^{-6})]$$

where,

$E_r$  = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

$P$  = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

$EE$  = notation directing the user to multiply the preceding number by 10 to the power of the following number

$F$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

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**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P018**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**Candl****PTI A****Issued: 7/19/2005**Emissions Unit ID: **P018****F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P019 - Prill Drum 6 - modification (this PTI replaces PTI 05-11391)	OAC rule 3745-31-05(A)  OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

**Candle-Lite****PTI Application: 05 12724****Issue****Facility ID: 053600002****Emissions Unit ID: P019**Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.4 pound per hour and 1.69 tons per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 1.6 pound per hour and 6.97 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

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

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

## 2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

## B. Operational Restrictions

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 8 percent by weight (of wax mix) for this emissions unit.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$Er = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

$$i=1$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

#### D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;

**Candle-Lite****PTI Application: 05 12721****Issue****Facility ID: 053600002****Emissions Unit ID: P019**

- b. the rolling, 365-day VOC emission limitation from P003 through P008, P010, P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

## **E. Testing Requirements**

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

1. Emission Limitation:

0.4 lb PE/hr and 1.69 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PE_r = (P) * (EF) * (1 - CE)$$

where,

PE<sub>r</sub> = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.005 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

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**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P019**

1.6 lb VOC/hr and 6.97 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$Er = (P) * [(-5.1 \text{ EE } -7) * (F * 100)^2 + (5.554 \text{ EE } -5) * (F * 100) + (1.5 \text{ EE } -6)]$$

where,

Er = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

EE = notation directing the user to multiply the preceding number by 10 to the power of the following number

F = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

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**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P019**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**Candle-Lite****PTI Application: 05 12721****Issue****Facility ID: 053600002****Emissions Unit ID: P019****F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P020 - Prill Drum 7 - modification (this PTI replaces PTI 05-11391)	OAC rule 3745-31-05(A)
	OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

**Candl**  
**PTI A**  
**Issued: 7/19/2005**

Emissions Unit ID: **P020**

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.4 pound per hour and 1.69 tons per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 1.6 pound per hour and 6.97 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant

to OAC rule 3745-31-05(A)(3).

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

## 2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

## B. Operational Restrictions

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 8 percent by weight (of wax mix) for this emissions unit.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$Er = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

**Candle-Lite****PTI Application: 05 12721****Issue:****Facility ID: 053600002****Emissions Unit ID: P020**

$$i=1$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

## **D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;
  - b. the rolling, 365-day VOC emission limitation from P003 through P008, P010,

P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

#### **E. Testing Requirements**

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

1. Emission Limitation:

0.4 lb PE/hr and 1.69 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PE_r = (P) \cdot (EF) \cdot (1 - CE)$$

where,

PE<sub>r</sub> = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.005 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

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**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P020**

1.6 lb VOC/hr and 6.97 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$Er = (P) * [(-5.1 EE^{-7}) * (F * 100)^2 + (5.554 EE^{-5}) * (F * 100) + (1.5 EE^{-6})]$$

where,

Er = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

EE = notation directing the user to multiply the preceding number by 10 to the power of the following number

F = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

**Candle-Lite**

**PTI Application: 05 12721**

**Issue**

**Facility ID: 053600002**

**Emissions Unit ID: P020**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**Candl****PTI A****Issued: 7/19/2005**Emissions Unit ID: **P020****F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P021 - Prill Drum 8 - modification (this PTI replaces PTI 05-11391)	OAC rule 3745-31-05(A)
	OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P021**

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.4 pound per hour and 1.69 tons per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 1.6 pound per hour and 6.97 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant

to OAC rule 3745-31-05(A)(3).

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

## 2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

## B. Operational Restrictions

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 8 percent by weight (of wax mix) for this emissions unit.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$Er = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

**Candle-Lite****PTI Application: 05 12721****Issue****Facility ID: 053600002****Emissions Unit ID: P021**

$$i=1$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

## **D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;
  - b. the rolling, 365-day VOC emission limitation from P003 through P008, P010,

P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

#### **E. Testing Requirements**

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

1. Emission Limitation:

0.4 lb PE/hr and 1.69 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PE_r = (P) \cdot (EF) \cdot (1 - CE)$$

where,

PE<sub>r</sub> = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.005 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

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**Candle-Lite**

**PTI Application: 05 12721**

**Issue**

**Facility ID: 053600002**

**Emissions Unit ID: P021**

1.6 lb VOC/hr and 6.97 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$E_r = (P) * [(-5.1 \text{ EE }^{-7}) * (F * 100)^2 + (5.554 \text{ EE }^{-5}) * (F * 100) + (1.5 \text{ EE }^{-6})]$$

where,

$E_r$  = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

$P$  = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

$EE$  = notation directing the user to multiply the preceding number by 10 to the power of the following number

$F$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

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**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P021**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**Candl****PTI A****Issued: 7/19/2005**Emissions Unit ID: **P021****F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P022 - Prill Drum 9 - modification (this PTI replaces PTI 05-11391)	OAC rule 3745-31-05(A)
	OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P022**

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.4 pound per hour and 1.69 tons per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 1.6 pound per hour and 6.97 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

The emissions limitation specified by this rule is less stringent than the emissions

limitation established pursuant to OAC rule 3745-31-05(A)(3).

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

Candle-Lite

PTI Application: 05 12724

Issue

Facility ID: 053600002

Emissions Unit ID: P022

**2. Additional Terms and Conditions**

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

**B. Operational Restrictions**

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 8 percent by weight (of wax mix) for this emissions unit.

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

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$E_r = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

#### **D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;
  - b. the rolling, 365-day VOC emission limitation from P003 through P008, P010,

P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

#### **E. Testing Requirements**

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

1. Emission Limitation:

0.4 lb PE/hr and 1.69 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PEr = (P) \cdot (EF) \cdot (1 - CE)$$

where,

PEr = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.005 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

166

**Candle-Lite**

**PTI Application: 05 12721**

**Issue**

**Facility ID: 053600002**

**Emissions Unit ID: P022**

1.6 lb VOC/hr and 6.97 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$E_r = (P) * [(-5.1 \text{ EE } -7) * (F * 100)^2 + (5.554 \text{ EE } -5) * (F * 100) + (1.5 \text{ EE } -6)]$$

where,

$E_r$  = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

$P$  = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

$EE$  = notation directing the user to multiply the preceding number by 10 to the power of the following number

$F$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

168

**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P022**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**Candl****PTI A****Issued: 7/19/2005**Emissions Unit ID: **P022****F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P023 - Prill Drum 10 - modification (this PTI replaces PTI 05-11391)	OAC rule 3745-31-05(A)
	OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P023**

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.4 pound per hour and 1.69 tons per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 1.6 pound per hour and 6.97 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

The emissions limitation specified by this rule is less stringent than the emissions

limitation established pursuant to OAC rule 3745-31-05(A)(3).

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

Candle-Lite

PTI Application: 05 12721

Issue

Facility ID: 053600002

Emissions Unit ID: P023

**2. Additional Terms and Conditions**

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

**B. Operational Restrictions**

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 8 percent by weight (of wax mix) for this emissions unit.

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

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$E_r = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

#### **D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;
  - b. the rolling, 365-day VOC emission limitation from P003 through P008, P010,

**Candle-Lite****PTI Application: 05 12721****Issue****Facility ID: 053600002****Emissions Unit ID: P023**

P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

### **E. Testing Requirements**

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

1. Emission Limitation:

0.4 lb PE/hr and 1.69 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PE_r = (P) \cdot (EF) \cdot (1 - CE)$$

where,

PE<sub>r</sub> = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.005 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

175

**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P023**

1.6 lb VOC/hr and 6.97 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$Er = (P) * [(-5.1 \text{ EE } -7) * (F * 100)^2 + (5.554 \text{ EE } -5) * (F * 100) + (1.5 \text{ EE } -6)]$$

where,

Er = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

EE = notation directing the user to multiply the preceding number by 10 to the power of the following number

F = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

177

**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P023**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**Candl****PTI A****Issued: 7/19/2005**Emissions Unit ID: **P023****F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P024 - Prill Drum 11 - modification (this PTI replaces PTI 05-11391)	OAC rule 3745-31-05(A)
	OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

**Candle-Lite**

**PTI Application: 05 12724**

**Issue**

**Facility ID: 053600002**

**Emissions Unit ID: P024**

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.4 pound per hour and 1.69 tons per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 1.6 pound per hour and 6.97 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

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

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

## 2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

## B. Operational Restrictions

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 8 percent by weight (of wax mix) for this emissions unit.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$Er = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

$$i=1$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- the color of the emissions;
  - the cause of the visible emissions;
  - the total duration of any visible emission incident; and
  - any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

#### D. Reporting Requirements

- The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - the fragrance concentration limitation of 10%, by weight;

**Candle-Lite****PTI Application: 05 12721****Issue****Facility ID: 053600002****Emissions Unit ID: P024**

- b. the rolling, 365-day VOC emission limitation from P003 through P008, P010, P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

## **E. Testing Requirements**

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

1. Emission Limitation:

0.4 lb PE/hr and 1.69 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PE_r = (P) \cdot (EF) \cdot (1 - CE)$$

where,

PE<sub>r</sub> = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.005 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

184

**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P024**

1.6 lb VOC/hr and 6.97 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$Er = (P) * [(-5.1 \text{ EE } -7) * (F * 100)^2 + (5.554 \text{ EE } -5) * (F * 100) + (1.5 \text{ EE } -6)]$$

where,

Er = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

EE = notation directing the user to multiply the preceding number by 10 to the power of the following number

F = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

186

**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P024**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**Candle-Lite****PTI Application: 05 12721****Issue****Facility ID: 053600002****Emissions Unit ID: P024****F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P025 - Prill Drum 12 - modification (this PTI replaces PTI 05-11391)	OAC rule 3745-31-05(A)  OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P025**

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.4 pound per hour and 1.69 tons per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 1.6 pound per hour and 6.97 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant

to OAC rule 3745-31-05(A)(3).

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

## 2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

## B. Operational Restrictions

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 8 percent by weight (of wax mix) for this emissions unit.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$Er = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

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$$i=1$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

#### **D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;
  - b. the rolling, 365-day VOC emission limitation from P003 through P008, P010,

P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

#### **E. Testing Requirements**

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

1. Emission Limitation:

0.4 lb PE/hr and 1.69 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PEr = (P)*(EF)*(1 - CE)$$

where,

PEr = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.005 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

193

**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P025**

1.6 lb VOC/hr and 6.97 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$Er = (P) * [(-5.1 \text{ EE } -7) * (F * 100)^2 + (5.554 \text{ EE } -5) * (F * 100) + (1.5 \text{ EE } -6)]$$

where,

Er = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

EE = notation directing the user to multiply the preceding number by 10 to the power of the following number

F = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

**Candle-Lite**

**PTI Application: 05 12721**

**Issue**

**Facility ID: 053600002**

**Emissions Unit ID: P025**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**Candl****PTI A****Issued: 7/19/2005**Emissions Unit ID: **P025****F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P026 - Prill Drum 13 - modification (this PTI replaces PTI 05-11391)	OAC rule 3745-31-05(A)
	OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P026**

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.4 pound per hour and 1.69 tons per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 1.6 pound per hour and 6.97 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant

to OAC rule 3745-31-05(A)(3).

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

## 2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

## B. Operational Restrictions

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 8 percent by weight (of wax mix) for this emissions unit.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$Er = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

**Candle-Lite****PTI Application: 05 12721****Issue****Facility ID: 053600002****Emissions Unit ID: P026**

$$i=1$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

## **D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;
  - b. the rolling, 365-day VOC emission limitation from P003 through P008, P010,

P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

#### E. Testing Requirements

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

1. Emission Limitation:

0.4 lb PE/hr and 1.69 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PEr = (P)*(EF)*(1 - CE)$$

where,

PEr = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.005 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

202

**Candle-Lite**

**PTI Application: 05 12721**

**Issue**

**Facility ID: 053600002**

**Emissions Unit ID: P026**

1.6 lb VOC/hr and 6.97 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$E_r = (P) * [(-5.1 \text{ EE } -7) * (F * 100)^2 + (5.554 \text{ EE } -5) * (F * 100) + (1.5 \text{ EE } -6)]$$

where,

$E_r$  = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

$P$  = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

$EE$  = notation directing the user to multiply the preceding number by 10 to the power of the following number

$F$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

204

**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P026**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**Candl****PTI A****Issued: 7/19/2005**Emissions Unit ID: **P026****F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P027 - Prill Drum 14 - modification (this PTI replaces PTI 05-11391)	OAC rule 3745-31-05(A)  OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P027**

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.4 pound per hour and 1.69 tons per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 1.6 pound per hour and 6.97 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

The emissions limitation specified by this rule is less stringent than the emissions

limitation established pursuant to OAC rule 3745-31-05(A)(3).

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

Candle-Lite

PTI Application: 05 12724

Issue

Facility ID: 053600002

Emissions Unit ID: P027

**2. Additional Terms and Conditions**

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

**B. Operational Restrictions**

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 8 percent by weight (of wax mix) for this emissions unit.

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

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$E_r = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

#### **D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;
  - b. the rolling, 365-day VOC emission limitation from P003 through P008, P010,

P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

#### **E. Testing Requirements**

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

1. Emission Limitation:

0.4 lb PE/hr and 1.69 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PEr = (P)*(EF)*(1 - CE)$$

where,

PEr = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.005 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

211

**Candle-Lite**

**PTI Application: 05 12724**

**Issue**

**Facility ID: 053600002**

**Emissions Unit ID: P027**

1.6 lb VOC/hr and 6.97 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$E_r = (P) * [(-5.1 \text{ EE } -7) * (F * 100)^2 + (5.554 \text{ EE } -5) * (F * 100) + (1.5 \text{ EE } -6)]$$

where,

$E_r$  = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

$P$  = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

$EE$  = notation directing the user to multiply the preceding number by 10 to the power of the following number

$F$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

213

**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P027**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**Candl****PTI A****Issued: 7/19/2005**Emissions Unit ID: **P027****F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P028 - Prill Tower 8 - modification (this PTI replaces PTI 05-11120)	OAC rule 3745-31-05(A)  OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P028**

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.2 pound per hour and 0.96 ton per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 0.6 pound per hour and 2.44 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

The emissions limitation specified by this rule is less stringent than the emissions

limitation established pursuant to OAC rule 3745-31-05(A)(3).

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

Candle-Lite

PTI Application: 05 12724

Issue

Facility ID: 053600002

Emissions Unit ID: P028

**2. Additional Terms and Conditions**

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

**B. Operational Restrictions**

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 10 percent by weight (of wax mix) for this emissions unit.

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

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$E_r = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.1)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

#### **D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;
  - b. the rolling, 365-day VOC emission limitation from P003 through P008, P010,

**Candle-Lite****PTI Application: 05 12721****Issue****Facility ID: 053600002****Emissions Unit ID: P028**

P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

### **E. Testing Requirements**

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

1. Emission Limitation:

0.2 lb PE/hr and 0.96 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PE_r = (P) \cdot (EF) \cdot (1 - CE)$$

where,

PE<sub>r</sub> = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (1,100 lbs wax /hr, 9,636,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.01 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

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**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P028**

0.6 lb VOC/hr and 2.44 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$E_r = (P) * [(-5.1 \text{ EE } -7) * (F * 100)^2 + (5.554 \text{ EE } -5) * (F * 100) + (1.5 \text{ EE } -6)]$$

where,

$E_r$  = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

$P$  = the maximum process weight rate (1,100 lbs wax /hr, 9,636,000 lbs wax/yr)

$EE$  = notation directing the user to multiply the preceding number by 10 to the power of the following number

$F$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.10)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

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**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P028**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**Candl****PTI A****Issued: 7/19/2005**Emissions Unit ID: **P028****F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P029 - Prill Tower 9 - modification (this PTI replaces PTI 05-11389)	OAC rule 3745-31-05(A)
	OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

**Candle-Lite**

PTI Application: 05 12724

**Issue**

Facility ID: 053600002

Emissions Unit ID: P029

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.2 pound per hour and 0.96 ton per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 0.6 pound per hour and 2.44 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

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

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

## 2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

## B. Operational Restrictions

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 10 percent by weight (of wax mix) for this emissions unit.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$Er = \sum_{i=1}^n Pi * [(- 5.1 EE -7) * (Fi * 100)^2 + (5.554 EE -5) * (Fi * 100) + (1.5 EE -6)]$$

$$i=1$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.1)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

#### D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;

**Candle-Lite****PTI Application: 05 12721****Issue****Facility ID: 053600002****Emissions Unit ID: P029**

- b. the rolling, 365-day VOC emission limitation from P003 through P008, P010, P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

## **E. Testing Requirements**

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

1. Emission Limitation:

0.2 lb PE/hr and 0.96 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$PE_r = (P) \cdot (EF) \cdot (1 - CE)$$

where,

PE<sub>r</sub> = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (1,100 lbs wax /hr, 9,636,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.01 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

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**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P029**

0.6 lb VOC/hr and 2.44 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$E_r = (P) * [(-5.1 \text{ EE }^{-7}) * (F * 100)^2 + (5.554 \text{ EE }^{-5}) * (F * 100) + (1.5 \text{ EE }^{-6})]$$

where,

$E_r$  = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

$P$  = the maximum process weight rate (1,100 lbs wax /hr, 9,636,000 lbs wax/yr)

$EE$  = notation directing the user to multiply the preceding number by 10 to the power of the following number

$F$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.10)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

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**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P029**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**Candle-Lite****PTI Application: 05 12721****Issue****Facility ID: 053600002****Emissions Unit ID: P029****F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P037 - Prill Tower 10 - modification (this PTI replaces PTI 05-11389)	OAC rule 3745-31-05(A)  OAC rule 3745-17-07(A)(1)  OAC rule 3745-21-07(G)  OAC rule 3745-35-07(B)  OAC rule 3745-17-11(B)

**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P037**

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.2 pound per hour and 0.96 ton per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 0.6 pound per hour and 2.44 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant

to OAC rule 3745-31-05(A)(3).

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

## 2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

## B. Operational Restrictions

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 10 percent by weight (of wax mix) for this emissions unit.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$Er = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

**Candle-Lite****PTI Application: 05 12721****Issue****Facility ID: 053600002****Emissions Unit ID: P037**

$$i=1$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.1)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

## **D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;
  - b. the rolling, 365-day VOC emission limitation from P003 through P008, P010,

P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

#### **E. Testing Requirements**

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

1. Emission Limitation:

0.2 lb PE/hr and 0.96 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$\text{PER} = (P) \cdot (\text{EF}) \cdot (1 - \text{CE})$$

where,

PER = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (1,100 lbs wax /hr, 9,636,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.01 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

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**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P037**

0.6 lb VOC/hr and 2.44 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$E_r = (P) * [(-5.1 \text{ EE } -7) * (F * 100)^2 + (5.554 \text{ EE } -5) * (F * 100) + (1.5 \text{ EE } -6)]$$

where,

$E_r$  = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

$P$  = the maximum process weight rate (1,100 lbs wax /hr, 9,636,000 lbs wax/yr)

$EE$  = notation directing the user to multiply the preceding number by 10 to the power of the following number

$F$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 10% = 0.10)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

**Candle-Lite**

**PTI Application: 05 12721**

**Issue**

**Facility ID: 053600002**

**Emissions Unit ID: P037**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P038 - Prill Drum 17 - modification (this PTI replaces PTI 05-11389)	OAC rule 3745-31-05(A)
	OAC rule 3745-17-07(A)(1)
	OAC rule 3745-21-07(G)
	OAC rule 3745-35-07(B)
	OAC rule 3745-17-11(B)

**Candl**

**PTI A**

**Issued: 7/19/2005**

Emissions Unit ID: **P038**

Applicable Emissions  
Limitations/Control Measures

Particulate emissions (PE) shall not exceed 0.4 pound per hour and 1.69 tons per year.

Visible emissions from the stack shall not exceed 5% opacity, as a six minute average.

Volatile organic compound (VOC) emissions shall not exceed 1.6 pound per hour and 6.97 tons per year.

See A.2.a and b below.

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

See A.2.c below.

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

The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant

to OAC rule 3745-31-05(A)(3).

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

## 2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05 (A) (3) shall be demonstrated by the use of good operating practices designed to minimize emissions.
- 2.b** The hourly and annual emission limitations, excluding the combined rolling, 365-day emission limitation, are established to reflect potential to emit for this emissions unit. Therefore, it is not necessary to set up monitoring, record keeping, and reporting requirements to ensure compliance with these limits.
- 2.c** The permittee has sufficient existing records to demonstrate compliance with the rolling, 365-day limitation following the issuance of this permit. Therefore, it is not necessary to establish limitations for the first 365 days of operation following the issuance of this permit.

## B. Operational Restrictions

1. Fragrance containers shall be kept closed when not in use to prevent fragrance from escaping.
2. Batching tanks shall be equipped with lids and kept covered in such a way as to minimize the discharge of fugitive emissions to the atmosphere.
3. During normal operations, the prill tower room exit doors shall be kept closed to minimize the discharge of fugitive emissions to the atmosphere.
4. The fragrance concentration shall not exceed 8 percent by weight (of wax mix) for this emissions unit.

## C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain daily records of the following information for emission units P003 through P008, P010, P011, P012, P014 through P029, P037, and P038:
  - a. the fragrance concentration in percent by weight of wax mix for each batch;
  - b. the amount of wax mix per batch, in pounds;
  - c. the daily VOC emissions calculated as follows:

$$Er = \sum_{i=1}^n P_i * [(- 5.1 \text{ EE } -7) * (F_i * 100)^2 + (5.554 \text{ EE } -5) * (F_i * 100) + (1.5 \text{ EE } -6)]$$

**Candle-Lite****PTI Application: 05 12721****Issue****Facility ID: 053600002****Emissions Unit ID: P038**

$$i=1$$

where,

$E_r$  = the daily emission rate, in lbs VOC

$P_i$  = the amount of wax mix per batch, in pounds

$F_i$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

$n$  = total number of batches run for the day

- d. the rolling, 365-day summation of VOC emissions combined.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the color of the emissions;
    - b. the cause of the visible emissions;
    - c. the total duration of any visible emission incident; and
    - d. any corrective actions taken to eliminate the visible emissions.

Notwithstanding the frequency of the monitoring requirements specified in this section, the permittee may reduce the frequency of visual observations from daily to weekly readings for this emissions unit if for 2 full quarters the facility's visual observations indicate no visible emissions.

The permittee shall revert to daily readings if any visible emissions are observed.

For the purpose of this monitoring, the daily checks for visible particulate emissions are not required to be conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

## **D. Reporting Requirements**

1. The permittee shall submit quarterly deviation (excursion) reports to Ohio EPA, Southwest District Office, in writing, which identify all exceedances of the following:
  - a. the fragrance concentration limitation of 10%, by weight;
  - b. the rolling, 365-day VOC emission limitation from P003 through P008, P010,

P011, P012, P014 through P029, P037, and P038, combined.

These reports shall be submitted in accordance with Part I - General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports to Ohio EPA, Southwest District Office, that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

#### **E. Testing Requirements**

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

1. Emission Limitation:

0.4 lb PE/hr and 1.69 ton PE/yr

Applicable Compliance Method:

The hourly and annual PE limitations were established as follows:

$$\text{PER} = (P) \cdot (\text{EF}) \cdot (1 - \text{CE})$$

where,

PER = the particulate emission rate, in lbs/hr or lbs/yr, as appropriate

P = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

EF = the emission factor, assumed similar to particulate emission factor from painting operations (0.005 lb PE/lb prill)

CE = the control efficiency of the cyclone serving as the prill dust recovery system (0.98)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

2. Emission Limitation:

247

**Candle-Lite**

**PTI Application: 05 12721**

**Issue**

**Facility ID: 053600002**

**Emissions Unit ID: P038**

1.6 lb VOC/hr and 6.97 tons VOC/yr

Applicable Compliance Method:

The hourly and annual VOC emission limitations were established as follows:

$$E_r = (P) * [(-5.1 \text{ EE } -7) * (F * 100)^2 + (5.554 \text{ EE } -5) * (F * 100) + (1.5 \text{ EE } -6)]$$

where,

$E_r$  = the VOC emission rate, in lbs/hr or lbs/yr, as appropriate

$P$  = the maximum process weight rate (3,850 lbs wax /hr, 33,726,000 lbs wax/yr)

$EE$  = notation directing the user to multiply the preceding number by 10 to the power of the following number

$F$  = the fragrance concentration per batch, expressed as decimal fraction (i.e., 8% = 0.08)

For the annual emission rate, the units are converted from pounds to tons by dividing the result by 2000 lbs/ton.

3. Emission Limitation:

Combined emissions of VOC from all emission units in this permit to install (P003 through P008, P010, P011, P012, P014 through P029, P037, and P038) shall not exceed 64 tons VOC per rolling 365-day summation.

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

4. Emission Limitation:

5% opacity, as a 6-minute average, from the stack

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

5. Operational Restriction:

Fragrance concentration shall not exceed 10 percent by weight (of wax mix)

**Candl**  
**PTI A**  
**Issued: 7/19/2005**

Emissions Unit ID: **P038**

Applicable Compliance Method:

Compliance shall be determined by the record keeping in Section C.1. of this permit.

**F. Miscellaneous Requirements**

Modeling to demonstrate compliance with the Ohio's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emission increase for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.