

Facility ID: 1431404130 Issuance type: Final State Permit To Operate

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

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

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

[Go to Part II for Emissions Unit P004](#)

[Go to Part II for Emissions Unit P005](#)

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Facility ID: 1431404130 Emissions Unit ID: P004 Issuance type: Final State Permit To Operate

[Go to the top of this document](#)

Part II - Special Terms and Conditions

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

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (a) None.
2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (a) None.

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P004 - Kiln No. 2 with Thermal Oxidizer	OAC rule 3745-31-05(A)(3) (PTI 14-05702)	The kiln and kiln afterburner emissions are subject to the following limitations: Volatile Organic Compound (VOC) emissions shall not exceed 3.93 pounds per hour. Particulate Emissions (PE) shall not exceed 0.20 pound per hour and 0.86 ton per year. Particulate Emissions 10 microns and less in diameter (PM10) shall not exceed 0.15 pound per hour and 0.64 ton per year. Nitrogen Oxide (NOx) emissions shall not exceed 0.28 pound per hour and 1.23 tons per year. Sulfur Dioxide (SO2) emissions shall not exceed 0.34 pound per hour and 1.5 tons per year. Carbon Monoxide (CO) emissions shall not exceed 0.68 pound per hour and 3.0 tons per year.
	OAC rule 3745-31-05(C)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-21-08(B) and 3745-31-05(C). The kiln and kiln afterburner organic compound emissions shall not exceed 1.44 tons/month and 17.3 tons per year.
	OAC rule 3745-17-07(A)(1)	See term A.2.d.
	OAC rule 3745-17-11	See term A.2.b.
	OAC rule 3745-21-08(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). See term A.2.e.

2. Additional Terms and Conditions

- (a) Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limits and the use of a 95% efficient thermal incinerator on the kiln. Visible particulate emissions from the stacks associated with this emissions unit shall not exceed twenty per cent opacity, as a six-minute average, except as specified by rule. The hourly emission limitations outlined in section A.1 are based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with these limits.

This emissions unit shall be equipped with a control device for VOC emissions that is at least 95% efficient for VOC emissions entering the control device.

The permittee shall satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BAT requirements.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. On June 24, 2003, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

B. Operational Restrictions

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

C. Monitoring and/or Record Keeping Requirements

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

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

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

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

2. The permittee shall collect and record the following information each month for this emissions unit:

a. The emissions unit's production rate in tons/month.

b. The total VOC emission rate, in tons per month [a x 156.5 lbs. VOC/ton production* x (1-0.95) (or the control efficiency established during the most recent performance test) plus the emissions from the natural gas usage in the afterburner].

* the emission factor is based on information submitted by the permittee.

3. The permit to install for this emissions unit (P004) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: phenol
 TLV (ug/m3): 19,245
 Maximum Hourly Emission Rate (lbs/hr): 3.93
 Predicted 1-Hour Maximum Ground-Level
 Concentration (ug/m3): 32.95
 MAGLC (ug/m3): 458.22

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

- a. Changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. Changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. Physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under

other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

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

- a. A description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. Documentation of it's evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. When the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in section B.1.
2. The permittee shall submit an annual report of the total VOC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
3. The permittee shall submit deviation (excursion) reports which identify any exceedance of the monthly VOC emissions limit in section A.1.
4. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

E. Testing Requirements

1. Emissions Limitation:
Visible particulate emissions from the stacks associated with this emissions unit shall not exceed twenty per cent opacity, as a six-minute average, except as specified by rule.

Applicable Compliance Method:
Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).
2. Emissions Limitation:
Organic compound (VOC) emissions shall not exceed 3.93 pounds per hour.

Applicable Compliance Method:
The VOC emissions are calculated by multiplying the hourly production rate of (0.5 tons/hour) times the VOC emission factor (156.75 lbs of VOC/ton) times (1-0.95) plus the fuel usage for the kiln afterburner (0.001 mmft³/hr) times the OC emission factor (11.0 lbs of OC/mmft³). The emission factor (156.75 lb of OC/ton) was provided in PTI application 14-05702 submitted March 24, 2005. The emissions factor 11.0 lb of OC/mmft³ was taken from AP-42, Fifth Edition, Chapter 1.4, Natural Gas Combustion.
3. Emissions Limitation:
The kiln and kiln afterburner organic compound emissions shall not exceed 17.3 tons per year.

Applicable Compliance Method:
The annual VOC emissions are calculated by multiplying the hourly emission limitation of 3.93 lbs of VOC/hour x 8760 hours per year x ton/2000 lbs.

Emissions Limitation:
The kiln and kiln afterburner organic compound emissions shall not exceed 1.44 tons per month.

Applicable Compliance Method:
Compliance with the monthly emission limitation shall be demonstrated by the recordkeeping required in section C.2.
4. Emissions Limitation:
Particulate emissions shall not exceed 0.20 pound per hour.

Applicable Compliance Method:
The particulate emissions are calculated by multiplying the hourly production rate for the kiln of (0.5 tons/hour) times the PE emission factor (0.37 lb of PE/ton) plus the fuel usage for the kiln afterburner (0.001mmft³/hr) times the PE emission factor (7.6 lbs/mmft³). The emission factor (0.37 lb of PE/ton) was provided in PTI application 14-05702 submitted March 24, 2005. The emission factor (7.6 lbs of PE/mmft³) was taken from AP-42, Fifth Edition, Chapter 1.4, Natural Gas Combustion.
Emissions Limitation:
Particulate emissions shall not exceed 0.86 ton per year.

Applicable Compliance Method:
The annual PE emissions are calculated by multiplying the hourly emission limitation of 0.2 lbs of PE/hour x 8760 hours per year x ton/2000 lbs.
5. Emissions Limitation:
Particulate emissions 10 microns and less in diameter (PM10) shall not exceed 0.15 pound per hour.

Applicable Compliance Method:
The PM10 emissions are calculated by multiplying the hourly production rate for the kiln (0.5 tons/hour) times the PM10 emission factor (0.28 lb of PM10/ton) plus the fuel usage for the kiln afterburner (0.001 mmft³/hr) times the PM10 emission factor (7.6 lbs of PM10/mmft³). The emission factor (0.28 lb of PM10/ton) was provided in PTI application 14-05702 submitted March 24, 2005. The emission factor (7.6 lbs of PM10/mmft³) was taken from AP-42, Fifth Edition, Chapter 1.4, Natural Gas Combustion.

Emissions Limitation:

PM10 emissions shall not exceed 0.64 TPY.

Applicable Compliance Method:

The annual PM10 emissions are calculated by multiplying the hourly emission limitation of 0.15 lbs of PM10/hour x 8760 hours per year x ton/2000 lbs.

6. Emissions Limitation:

Nitrogen oxide (NOx) emissions shall not exceed 0.28 lb/hr.

Applicable Compliance Method:

The NOx emissions are calculated by multiplying the hourly production rate for the kiln in (0.5 tons/hour) times the NOx emission factor (0.35 lb of NOx/ton) plus the fuel usage for the kiln afterburner (0.001 mmft3/hr) times the NOx emission factor (100.0 lbs of NOx/mmft3). The emissions factor (0.35 lb of NOx/ton) was provided in PTI application 14-05702 submitted March 24, 2005. The emission factor (100.0 lbs of NOx/mmft3) was taken from AP-42, Fifth Edition, Chapter 1.4, Natural Gas Combustion.

Emissions Limitation:

NOx emissions shall not exceed 1.23 TPY.

Applicable Compliance Method:

The annual NOx emissions are calculated by multiplying the hourly emission limitation of 0.28 lbs of NOx/hour x 8760 hours per year x ton/2000 lbs.

7. Emissions Limitation:

Sulfur Dioxide (SO2) emissions shall not exceed 0.34 pound per hour.

Applicable Compliance Method:

The SO2 emissions are calculated by multiplying the hourly production rate for the kiln (0.5 tons/hour) times the SO2 emission factor (0.67 lb of SO2/ton) plus the hourly fuel usage for the kiln afterburner (0.001 mmft3/hr) times the SO2 emission factor (0.60 lb/mmft3). The emission factor (0.67 lb of SO2/ton) was provided in PTI application 14-05702 submitted March 24, 2005. The emission factor (0.60 lb of SO2/mmft3) was taken from AP-42, Fifth Edition, Chapter 1.4, Natural Gas Combustion.

Emissions Limitation:

Carbon monoxide emissions shall not exceed 0.68 lb/hr.

Applicable Compliance Method:

The CO emissions are calculated by multiplying the hourly production rate for the kiln (0.5 tons/hour) times the CO emission factor (1.20 lbs of CO/ton) plus the fuel usage for the kiln afterburner (0.001 mmft3/hr) times the CO emission factor (84.0 lbs of CO/mmft3). The emission factor (1.20 lbs of CO/ton) was provided in PTI application 14-05702 submitted March 24, 2005. The emission factor (84.0 lbs of CO/mmft3) was taken from AP-42, Fifth Edition, Chapter 1.4, Natural Gas Combustion.

8. Emissions Limitation:

Carbon monoxide emissions shall not exceed 3.0 TPY

Applicable Compliance Method:

The annual CO emissions are calculated by multiplying the hourly emission limitation of 0.68 lbs of CO/hour x 8760 hours per year x ton/2000 lbs.

Emissions Limitation:

Sulfur dioxide emissions shall not exceed 1.5 TPY.

Applicable Compliance Method:

The annual SO2 emissions are calculated by multiplying the hourly emission limitation of 0.34 lbs of SO2/hour x 8760 hours per year x ton/2000 lbs.

F. Miscellaneous Requirements

- The following terms and conditions of this permit are federally enforceable: A, B, C.1 - C.2, D and E.

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Facility ID: 1431404130 Emissions Unit ID: P005 Issuance type: Final State Permit To Operate

[Go to the top of this document](#)

Part II - Special Terms and Conditions

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

- For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - None.
- For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - None.

A. Applicable Emissions Limitations and/or Control Requirements

- The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the

applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P005 - Curing Oven No. 2	OAC rule 3745-31-05(A)(3) (PTI 14-05702)	The curing oven and curing oven afterburner emissions are subject to the following limitations: Particulate Emissions (PE) shall not exceed 0.2 pound per hour and 0.88 ton per year. Particulate emissions 10 microns and less in diameter (PM10) shall not exceed 0.13 pound per hour and 0.56 ton per year. Organic Compound (VOC) emissions shall not exceed 2.52 pounds per hour. Nitrogen Oxide (NOx) emissions shall not exceed 0.1 lb/mmBtu and 3.2 TPY. Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu and 3.3 TPY. Sulfur Dioxide (SO2) emissions shall not exceed 0.0006 lb/mmBtu and 0.03 TPY.
	OAC rule 3745-31-05(C)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-21-08(B) and 3745-31-05(C). The curing oven and curing oven afterburner organic compound emissions shall not exceed 0.92 ton/month and 11.0 TPY.
	OAC rule 3745-17-07(A)(1)	See term A.2.d.
	OAC rule 3745-17-11	See term A.2.b.
	OAC rule 3745-21-08(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). See term A.2.e.

2. Additional Terms and Conditions

- (a) Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the emission limits, and the use of a 95% efficient thermal oxidizer on the curing oven. Visible particulate emissions from the stacks associated with this emissions unit shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule. The hourly emission limitations outlined in section A.1 are based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with these limits. This emissions unit shall be equipped with a control device for VOC emissions that is at least 95% efficient for VOC emissions entering the control device. The permittee shall satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BAT requirements.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. On June 24, 2003, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

B. Operational Restrictions

- 1. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 1450 degrees Fahrenheit or more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.

C. Monitoring and/or Record Keeping Requirements

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

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

- a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than 1450 degrees Fahrenheit or more than 50 degrees

- Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
- b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
2. The permittee shall collect and record the following information each month for this emissions unit:
 - a. The emissions unit's production rate in tons/month.
 - b. The total VOC emission rate, in tons per month [0.75 tons/month x 65.27 lb VOC/ton production* x (1-0.95) (or the control efficiency established during the most recent performance test) plus the emissions from the natural gas usage in the afterburner].
* the emission factor is based on information submitted by the permittee.
 3. The permit to install for this emissions unit (P005) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: phenol
 TLV (ug/m3): 19,245
 Maximum Hourly Emission Rate (lbs/hr): 0.33
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 99.99
 MAGLC (ug/m3): 458.22

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

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

- a. A description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. Documentation of it's evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. When the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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

- a. Changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - b. Changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
 - c. Physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
- D. Reporting Requirements**
1. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified in section B.1.
 2. The permittee shall submit deviation (excursion) reports which identify any exceedance of the monthly VOC emissions limit in section A.1.
 3. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.
 4. The permittee shall submit annual reports which specify the total VOC emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
- E. Testing Requirements**
1. Emissions Limitation:
Visible particulate emissions from the stacks associated with this emissions unit shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.

Applicable Compliance Method:

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

2. Emissions Limitation:

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

Applicable Compliance Method:

The hourly PM emissions are calculated by multiplying the hourly production rate for the blender (0.6 tons/hour) times the PE emission factor (0.60 lb of PE/ton) times (1- control efficiency) and adding to the hourly production rate for the curing oven (0.75 tons/hour) times the PE emission factor (0.20 lb of PE/ton). The emission factors were provided in PTI application 14-05702 submitted March 24, 2005.

The annual PM emissions are calculated by multiplying the hourly emission limitation of 0.2 lb of PE/hour x 8760 hours per year x ton/2000 lbs.

3. Emissions Limitation:

Particulate emissions 10 microns and less in diameter (PM10) shall not exceed 0.13 pound per hour and 0.56 ton per year.

Applicable Compliance Method:

The hourly PM10 emissions are calculated by multiplying the hourly production rate for the blender in tons per hour (0.6 tons/hour) times the PM10 emission factor (0.30 lb of PM10/ton) times (1- control efficiency) plus the hourly production rate for the curing oven (0.75 tons/hour) times the PM10 emission factor (0.10 lb of PM10/ton). The emission factors were provided in PTI application 14-05702 submitted March 24, 2005.

The annual PM10 emissions are calculated by multiplying the hourly emission limitation of 0.13 lb of PM10/hour x 8760 hours per year x ton/2000 lbs.

4. Emissions Limitation:

Volatile Organic Compound (VOC) emissions shall not exceed 2.52 pounds per hour and 11.0 tons per year from the curing oven.

Applicable Compliance Method:

The hourly OC emissions are calculated by multiplying the hourly production rate (0.75 tons per hour) times the VOC emission factor (65.27 lb of OC/ton) times (1 - 0.95) plus the fuel usage for the kiln afterburner (0.0061mmft³/hour) times the OC emission factor (11.0 lbs of OC/mmft³). The (65.27 lb of OC/ton) emission factor was provided in PTI application 14-05702 submitted March 24, 2005. The (11.0 lbs of OC/mmft³) emission factor was taken from AP-42, Fifth Edition, Chapter 1.4, Natural Gas Combustion.

The annual VOC emissions are calculated by multiplying the hourly emission limitation of 2.52 lbs of VOC/hour x 8760 hours per year x ton/2000 lbs.

Emissions Limitation:

Volatile Organic Compound emissions shall not exceed 0.92 ton per month.

Applicable Compliance Method:

Compliance with the monthly emission limitation shall be demonstrated by the recordkeeping required in section C.2.

5. Emissions Limitations:

Emissions from the curing oven shall not exceed the following:

Nitrogen Oxide (NO_x) emissions shall not exceed 0.1 lb/mmBtu.
Carbon Monoxide (CO) emissions shall not exceed 0.084 lb/mmBtu.
Sulfur Dioxide (SO₂) emissions shall not exceed 0.0006 lb/mmBtu.

Applicable Compliance Method:

The emissions are calculated by dividing the emission factors by the heat content of the fuel burned. The emission factors are taken from AP-42, Fifth Edition, Section 1.4 (7/98), Natural Gas Combustion.

6. Emissions Limitations:

Emissions from the curing oven and afterburner shall not exceed the following:

Nitrogen Oxide (NO_x) emissions shall not exceed 3.2 TPY.
Carbon Monoxide (CO) emissions shall not exceed 3.3 TPY.
Sulfur Dioxide (SO₂) emissions shall not exceed 0.03 TPY.

Applicable Compliance Method:

The emissions are calculated by multiplying the fuel usage times the emissions factors and converting the pounds to tons. The emission factors are taken from AP-42, Fifth Edition, Section 1.4 (7/98), Natural Gas Combustion.

7. The curing oven and curing oven afterburner organic compound emissions shall not exceed 0.92 tons per month.

Applicable Compliance Method:

Compliance with the monthly emission limitation shall be demonstrated by the recordkeeping required in section C.2.

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

- a. The emission testing shall be conducted by 6 months after issuance of this permit to operate.
- b. The emission testing shall be conducted to demonstrate compliance with the destruction efficiency and VOC emission limitations.
- c. The test method(s) which must be employed to demonstrate compliance with the destruction efficiency and VOC emission limitations are specified below. Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.

Method 25, 40 CFR Part 60, Appendix A

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Hamilton County Department of Environmental Services.

F. Miscellaneous Requirements

1. The following terms and conditions of this permit are federally enforceable: A, B, C.1 - C.2, D and E.