



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL MODIFICATION
MIAMI COUNTY**

CERTIFIED MAIL

Street Address:

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

Mailing Address:

Lazarus Gov.
Center

Application No: 08-04133

DATE: 8/6/2002

Matsushita Display Devices Co of America
Nancy Friend
1400 West Market St
Troy, OH 45373

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

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
236 East Town Street, Room 300
Columbus, Ohio 43215

Very truly yours,

Michael W. Ahern

Michael W. Ahern, Supervisor
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA

RAPCA



**Permit To Install
Terms and Conditions**

**Issue Date: 8/6/2002
Effective Date: 8/6/2002**

FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 08-04133

Application Number: 08-04133
APS Premise Number: 0855140417
Permit Fee: **\$200**
Name of Facility: Matsushita Display Devices Co of America
Person to Contact: Nancy Friend
Address: 1400 West Market St
Troy, OH 45373

Location of proposed air contaminant source(s) [emissions unit(s)]:
**1400 West Market St
Troy, Ohio**

Description of proposed emissions unit(s):
Modify K019 and K021 to reference a regenerative thermal oxidizer and not a thermal incinerator.

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification 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 source(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 included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install General Terms and Conditions

1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. 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.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written 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. See B.10 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
- iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

2. 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, i.e., upset, 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. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to 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 emission unit(s) that is (are) served by such control system(s).

3. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. 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 request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

7. 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

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within 30 days after the issuance of this Permit To Install.

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

- i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
- ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

10. Permit To Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this 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 thirty (30) days after commencing operation of the source(s) covered by this permit.

11. 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.

12. 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.

B. State Only Enforceable 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 Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping of state-only enforceable 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 state-only required 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. 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.

4. 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.

5. Construction of New Sources(s)

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.

6. 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.

7. Applicability

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

8. 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.

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9. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

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.

C. 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>
particulate	14.54
organic compound	48.3
sulfur dioxide	0.09
nitrogen oxides	10.78
carbon monoxide	13.75

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

None

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
B006 - 21 mmBtu/hr Natural Gas Fired Boiler #6	OAC rule 3745-31-05 (A)(3)	0.020 lb particulate/mmBtu actual heat input, 1.84 TPY particulate emissions (PE) 0.03 lb/mmBtu sulfur dioxide (SO ₂), 2.76 TPY SO ₂ ; 0.15 lb/mmBtu carbon monoxide (CO), 13.75 TPY CO; 0.12 lb/mmBtu nitrogen dioxide (NO _x), 10.78 TPY NO _x ; 0.016 lb/mmBtu organic compound (OC), 1.47 TPY OC;
	OAC rule 3745-17-07 (A)	Visible emissions shall not exceed 10% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-10 (B)(1)	The limit specified by this rule is less stringent than that required in OAC rule 3745-31-05 (A)(3).
	40 CFR Part 60 (NSPS) Subpart Dc	The limit specified by this rule is equivalent to that required in OAC rule 3745-31-05 (A)(3).
		See A.I.2.a.

Modification Issued: 8/6/2002

2. Additional Terms and Conditions

- 2.a** The NSPS regulation does not specify emission limits for emissions units burning only natural gas.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the natural gas burned in this emissions unit, in million cubic feet.

IV. Reporting Requirements

1. The permittee shall submit annual exceedance reports which identify any exceedances of the annual emissions limitations for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
2. The permittee shall submit deviation (excursion) reports, in accordance with paragraph I.A.2. of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance the emission limitations in Section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation-

0.020 lb particulates/mmBtu actual heat input

Applicable Compliance Method -
Compliance with this limitation shall be based upon the emission factor given by the manufacturer of 0.01 lb/mmBtu. If required, compliance with this emission limitation shall be based on stack testing per OAC rule 3745-17-03(B)(9).

Emission Limitation -

1.84 TPY particulate emissions (PE)

Applicable Compliance Method -

Compliance with this limitation shall be based upon record keeping as specified in A.III.1. and shall be determined by multiplying the sum of the monthly natural gas usage records for the calendar year by the manufacturer's emission factor of 10 lb PE/mm cubic feet and dividing by 2,000 lbs/ton.

b. Emission Limitation -

0.03 lb/mmBtu SO₂

Applicable Compliance Method -

Compliance with this limitation will be assumed due to the negligible percent sulfur, by weight, in the fuel. If required, the permittee shall perform or require the supplier to perform an analysis of the natural gas for sulfur content in accordance with the appropriate ASTM method (such as, ASTM method D3031), or an equivalent method as approved by the Director, in order to demonstrate compliance with this emission limitation using the appropriate equation specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.1, Table 3.1-1 (10/96)

Emission Limitation -

2.76 TPY SO₂

Applicable Compliance Method -

Compliance with this limitation shall be based upon record keeping as specified in A.III.1. and shall be determined by

multiplying the sum of the monthly natural gas usage records for the calendar year by the manufacturer's emission factor of 30 lb SO₂/mm cubic feet and dividing by 2,000 lbs/ton.

c. Emission Limitation -

0.15 lb/mmBtu CO

Applicable Compliance Method -

This emission factor was provided by the manufacturer. Additionally, compliance with this limitation can be determined by multiplying the maximum hourly gas burning capacity of the emissions unit (0.021 lb/million cubic feet) by the emission factor for natural gas (84 lb/ CO/million cubic feet), given in AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-1 (2/98), and dividing by the maximum hourly heat input capacity of the emissions unit (21 mmBtu/hr).

Emission Limitation -

13.75 TPY CO

Applicable Compliance Method -

Compliance with this limitation shall be based upon record keeping as specified in A.III.1. and shall be determined by multiplying the sum of the monthly natural gas usage records for the calendar year by the manufacturer's emission factor of 150 lb CO/mm cubic feet and dividing by 2,000 lbs/ton.

d. Emission Limitation -

0.12 lb/mmBtu NO_x

Emissions Unit ID: B006

Applicable Compliance Method-

This emission factor was provided by the manufacturer. Additionally, compliance with this limitation can be determined by multiplying the maximum hourly gas burning capacity of the emissions unit (0.021 lb/million cubic feet) by the emission factor for natural gas (100 lb/ NOx/million cubic feet), given in AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-1 (2/98), and dividing by the maximum hourly heat input capacity of the emissions unit (21 mmBtu/hr).

Emission Limitation -

10.78 TPY NOx

Applicable Compliance Method -

Compliance with this limitation shall be based upon record keeping as specified in A.III.1. and shall be determined by multiplying the sum of the monthly natural gas usage records for the calendar year by the manufacturer's emission factor of 120 lb NOx/mm cubic feet and dividing by 2,000 lbs/ton.

e. Emission Limitation -

0.016 lb/mmBtu OC

Applicable Compliance Method -

This emission factor was provided by the manufacturer. Additionally, compliance with this limitation can be determined by multiplying the maximum hourly gas burning capacity of the emissions unit (0.021 lb/million cubic feet) by the emission factor for natural gas (5.5 lb/ OC/million cubic feet), given in AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-1 (7/98), and dividing by the maximum hourly heat input capacity of the emissions unit (21

mmBtu/hr).

Emission Limitation -
1.47 TPY OC

Applicable Compliance Method -
Compliance with this limitation shall be based upon record keeping as specified in A.III.1. and shall be determined by multiplying the sum of the monthly natural gas usage records for the calendar year by the manufacturer's emission factor of 16 lb OC/mm cubic feet and dividing by 2,000 lbs/ton.

f. Emission Limitation-

Visible emissions shall not exceed 10% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method-
Compliance with the visible emission limitations is presumed based upon the use of natural gas, which is considered inherently clean. If required, visible emission evaluations shall be performed in accordance with OAC rule 3745-17-03 (B)(1) using the

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VI. Miscellaneous Requirements

NSPS REQUIREMENTS

The following emissions unit is subject to the applicable provisions of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60.

Source Number	Source Description	NSPS Regulation (Subpart)
B006	21 mmBtu/hr Natural Gas Fired Boiler #6	40 CFR Part 60 (NSPS) Subpart Dc

The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

- a. construction date (no later than 30 days after such date);
- b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
- c. actual start-up date (within 15 days after such date); and
- d. date of performance testing (If required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency

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Matsushita Display Devices Co of America

PTI Application: **08 04122**

Modif

Facility ID: **0855140417**

Emissions Unit ID: B006

DAPC - Air Quality Modeling and Planning

P.O. Box 1049

Columbus, OH 43216-1049

and

Regional Air Pollution Control Agency

451 West Third Street

Dayton, Ohio 45422

Modification Issued: 8/6/2002

B. State Only Enforceable Section

I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
B006 - 21 mmBtu/hr Natural Gas Fired Boiler #6	None	None

2. Additional Terms and Conditions

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Modification Issued: 8/6/2002

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
K019 - Screen Process: Lacquer Spraying, Edge Cleaning and Drying; E-310, E-311, E-312 Permanently Enclosed vented to a Regenerative Thermal Oxidizer (RTO)	OAC rule 3745-31-05 (A)(3)	2.25 lbs/hr OC, including cleanup 54.05 lbs/day OC, including cleanup 9.86 TPY OC, including cleanup
	OAC rule 3745-21-07 (G)(2)	Reference Section A.I.2.a. and A.I.2.b. The requirements of this rule are less stringent than that required in OAC rule 3745-31-05 (A)(3).
	OAC rule 3745-21-07 (G)(6)	The requirements of this rule are equivalent to that required in OAC rule 3745-31-05 (A)(3).

2. Additional Terms and Conditions

- 2.a The organic compound (OC) emissions from this emissions unit, shall be controlled through the application of a permanent total enclosure for 100% capture and a regenerative thermal oxidizer, operating at a minimum of 90% control efficiency.

The OC emission control system is common to emissions units K019 and K021.

- 2.b The hourly emission limitation was established for purposes of this PTI to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limits.

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Matsu

PTI A₁

Modification Issued: 8/6/2002

Emissions Unit ID: K019

II. Operational Restrictions

1. The average temperature of the combustion chamber within the regenerative thermal oxidizer, for any 3-hour period while the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
2. The permanent total enclosure shall be maintained under negative pressure, at a minimum pressure differential that is not less than the minimum pressure differential (inches of water), established during the most recent emissions test that demonstrated the emissions unit was in compliance, whenever this emissions unit is in operation.
3. The coating line shall be equipped with a permanent total enclosure (PTE)* which shall be installed and operated in accordance with 40 CFR Part 51, Appendix M, Method 204. The PTE shall meet the following criteria:
 - a. any "Natural Draft Opening" (NDO)* shall be at least 4 equivalent diameters from each OC emission point;
 - b. the total area of all NDOs shall not exceed 5% of the surface area of the enclosure's four walls, floor and ceiling;
 - c. the average facial velocity (FV) of air through all NDOs shall be at least 3,600 m/hr (200 fpm) which corresponds to a pressure differential of 0.007 inches of water. The direction of air through all NDOs shall be into the enclosure;
 - d. all access doors and windows whose areas are not included in paragraph (b) and are not included in the calculation in paragraph (c) shall be closed during routine operation; and
 - e. all OC emissions must be captured and contained for discharge through the OC control device.

By satisfying the criteria above for establishing permanent total enclosure, the total organic capture efficiency shall be assumed to be 100%.

* Definitions for PTE and NDO:

Permanent Total Enclosure (PTE) - a permanently installed enclosure that completely surrounds a source of emissions such that all OC emissions are captured and contained for discharge through a control device.

Natural Draft Opening (NDO) - any permanent opening in the enclosure that remains open during operation of the facility and is not connected to a duct to which a fan is installed.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the regenerative thermal oxidizer 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 installed, 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 regenerative thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
 - 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 install, maintain and operate monitoring devices and a recorder which simultaneously measures the pressure inside and outside the permanent total enclosure and records the differential pressure. The monitoring and recording devices shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall maintain records of all 3-hour blocks of time during which the permanent total enclosure was not maintained at or above the minimum pressure differential (inches of water), established during the most recent emissions test that demonstrated the emissions unit was in compliance, whenever this emissions unit is in operation.

3. The permittee shall collect and record the following information each day for this emissions unit:
 - a. The amount of lacquer coating material employed, in pounds.
 - b. The organic compound (OC) content of the lacquer coating material, in percent by weight.
 - c. The total potential OC emission rate, in pounds, i.e., (a) x (b).

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- d. The amount of lacquer coating material disposed of as waste, in pounds.
 - e. The OC content of the waste lacquer coating material, in percent by weight.

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- f. The amount of OC in the waste lacquer coating material, in pounds, i.e., (d) x (e).
- g. The amount of lacquer coating material reclaimed, in pounds.
- h. The OC content of the lacquer coating material reclaimed, in pounds, i.e., (g) x (h).
- i. The amount of cleanup material employed, in pounds.
- j. The total OC emission rate, i.e., the OC amounts in (d) and (h) shall be summed and then subtracted from the sum of (c) and (i) . The resulting daily before-control emission rate shall then be multiplied by the average overall control efficiency from the most recent performance test that demonstrated that the emissions unit was in compliance.

IV. 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 regenerative thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature that was observed during the most recent emission test that demonstrated the emissions unit was in compliance.
2. The permittee shall submit quarterly summaries which include a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall submit pressure differential deviation (excursion) reports that identify all 3-hour blocks of time during which the permanent total enclosure was not maintained at the required differential pressure specified above.
4. The permittee shall submit deviation (excursion) reports, in accordance with paragraph I.A.2 of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation-
2.25 lbs/hr OC, including cleanup

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Applicable Compliance Method-

This OC limitation was determined in the following manner:

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$(2.85 \text{ gals lacquer/hr})(7.25 \text{ lbs OC/gal})(1 - a) = 2.07 \text{ lbs OC/hr from lacquer coating}$
 $(0.83 \text{ gals cleanup/hr})(7.25 \text{ lbs OC/gal})(b)(1 - a) = 0.12 \text{ lb OC/hr from cleanup}$
 $(0.64 \text{ lbs/hr})(1 - a) = 0.06 \text{ lbs OC/hr reclaimed from wastewater stripper}$
 $\text{Total} = 2.07 + 0.12 + 0.06 = 2.25 \text{ lbs OC/hr, including cleanup}$

Where:

a = 90% Overall Control Efficiency

- b. Emission Limitation-
54.05 lbs/day OC, including cleanup

Applicable Compliance Method-

Compliance shall be based upon the records maintained in Section A.III.3. and the following equation used to determine the lbs OC/day allowable emission rate.

$$X = (1 - a)[(\text{lbs lacquer OC/day}) + (\text{lbs cleanup OC/day})] - [(\text{lbs reclaim OC/day}) + (\text{lbs waste OC/day})]$$

Where:

X = lbs OC emissions/day

a = assume 90% for the overall control efficiency, until the actual percent is determined during stack testing

- c. Emission Limitation-
9.86 TPY OC, including cleanup

Applicable Compliance Method-

Compliance shall be based upon the summation of the daily emission rates, as determined above and divided by 2000 lbs/ton.

2. Formulation data or USEPA Method 24 shall be used to determine the organic compound contents of the coatings.
3. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within six months of commencement of operation of the emissions unit.

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- b. The emission testing shall be conducted to demonstrate compliance with the overall control system efficiency for OCs which will be determined as the product of the capture efficiency and the control efficiency of the regenerative thermal oxidizer
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

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

- d. The test(s) shall be conducted while emissions unit K019 is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District

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Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

VI. Miscellaneous Requirements

None

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B. State Only Enforceable Section

I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
K019 - Screen Process: Lacquer Spraying, Edge Cleaning and Drying; E-310, E-311, E-312 Permanently Enclosed vented to a Regenerative Thermal Oxidizer (RTO)	Reference the Additional Terms and Conditions	None

2. Additional Terms and Conditions

- 2.a The permittee shall be in compliance with Ohio EPA's Air Toxic Policy.

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that a changed emissions unit will still satisfy the Air Toxic Policy:
- a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - documentation of its evaluation and determination that the changed emissions unit still satisfies the Air Toxic Policy; and,

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

1. The permit to install for this emissions unit was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system 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 Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Toluene

TLV (ug/m³): 188,000

Maximum Hourly Emission Rate (lbs/hr): 2.25

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 40.81

MAGLC (ug/m³): 1880

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

- a. changes in the composition of the materials used (typically for coatings or cleanup

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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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is(are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
K020 - Frit Mixing/Application; E-504	OAC rule 3745-31-05 (A)(3)	43.07 lbs/day OC, from frit application, 40 lbs/day OC, from cleanup 15.2 TPY OC, including cleanup
		See T&C A.II.1.
		0.551 lb/hr particulate emissions
		Opacity shall not exceed 20 percent as a 6-minute average, except for one 6-minute period in any one hour when up to 60 percent is permissible.
	OAC rule 3745-17-07 (A) OAC rule 3745-17-11 (B) OAC rule 3745-21-07 (G)(9)	The limits based on these rules are equivalent to that required in OAC rule 3745-31-05 (A)(3).

2. Additional Terms and Conditions

- 2.a The 0.551 lb/hr particulate emission limit was developed to reflect the potential to emit for the emissions unit. Therefore, it is not necessary to develop record keeping and reporting requirements to ensure compliance with this limit.

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II. Operational Restrictions

1. The use of photochemically reactive materials, as defined in OAC rule 3745-21-01 (C)(5), in this emissions unit is prohibited.
2. The permittee shall employ a vacuum filtration system during frit mixing.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each day for this emissions unit:
 - a. The number of pounds of frit vehicle mixed and employed.
 - b. The number of pounds of frit vehicle accounted for as waste.
 - c. The organic compound content of the frit vehicle, in percent by weight.
 - d. The number of pounds of cleanup employed.
 - e. The organic compound content of the cleanup, in percent by weight.
 - f. The total organic compound emission rate for frit mixing and application, in pounds per day, including cleanup.
2. The permittee shall maintain a log of time(s) the vacuum filtration system is not functioning during frit mixing.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which include the following information, an identification of each day during which the organic compound emissions from the frit mixing exceeded 43.07 pounds per day, an identification of each day during which the organic compound emissions from cleanup exceeded 40 lbs/day, and the actual organic compound emissions for each such day.
2. The permittee shall submit deviation (excursion) reports, in accordance with paragraph I.A.2 of the General Terms and Conditions of this permit.
3. The permittee shall also submit annual reports to the Director (appropriate Ohio EPA District Office or local air agency) which specify the total organic compound emissions from this emissions unit

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for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

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

- a. Emission Limitation-
43.07 lbs/day OC, frit application
40 lbs/day OC, cleanup

Applicable Compliance Method-

Compliance shall be based upon the records maintained in section A.III.1. and the following equation used to determine the lbs OC/day allowable emission rate.

$$X = (0.13)yb + (0.18)yb + \text{cleanup}$$

Where:

b = OC content of frit vehicle, in percent by weight

y = lbs of frit vehicle mixed/day - lbs of frit vehicle accounted for as waste/day

X = lbs OC emissions/day

0.13 = the percent of frit lost during mixing

0.18 = the percent of frit lost during application

Cleanup = pounds of cleanup material employed * OC content of the cleanup material, in percent by weight

- b. Emission Limitation-
Opacity shall not exceed 20 percent as a 6-minute average, except for one 6-minute period in any one hour when up to 60 percent is permissible.

Applicable Compliance Method-

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03 (B)(1) using the tests and procedures specified in USEPA Reference Method 9.

- c. Emission Limitation-
0.551 lb/hr particulate emissions

Applicable Compliance Method-

The particulate emission rate was determined by using Table I of OAC rule 3745-17-11

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(B), where P is equal to the maximum process weight rate of 0.02 tons/hr. If required, compliance with this mass emission limitation shall be based upon stack testing per OAC rule 3745-17-03 (B)(10).

2. Formulation data or USEPA Method 24 shall be used to determine the organic compound contents of the coatings.

VI. Miscellaneous Requirements

None

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B. State Only Enforceable Section

I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
K020 - Frit Mixing/Application; E-504	Reference Additional Terms and Conditions	None

2. Additional Terms and Conditions

- 2.a The permittee shall be in compliance with Ohio EPA's Air Toxic Policy.

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that a changed emissions unit will still satisfy the Air Toxic Policy:
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the Air Toxic Policy; and,
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

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Emissions Unit ID: K020

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

1. The permit to install for this emissions unit was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system 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 Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: amyl acetate

TLV (ug/m³):532,000

Maximum Hourly Emission Rate (lbs/hr): 0.46

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 186.50

MAGLC (ug/m³): 5320

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

- a. changes in the composition of the materials used (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;

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- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

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

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
K021 - Frit Drying Tunnel with Permanently Enclosed vented to a Regenerative Thermal Oxidizer (RTO); E-505/E-507	OAC rule 3745-31-05 (A)(3)	5.55 lbs/day organic compounds (OC), excluding cleanup, 1.0 TPY OC, excluding cleanup See Section A.I.2.a. and A.II.1.
	OAC rule 3745-21-07 (G)(2)	The limit based on this rule is less stringent than that required in OAC rule 3745-31-05 (A)(3).

2. Additional Terms and Conditions

- 2.a The organic compound (OC) emissions from this emissions unit, shall be controlled through the application of a permanent total enclosure for 100% capture and a regenerative thermal oxidizer, operating at a minimum of 90% control OC efficiency.

The OC emission control system is common to emissions units K019 and K021.

- 2.b The permittee has the option to perform an additional demonstration to show that the PTE can not be compromised, under normal plant conditions, when the emissions unit is in operation (i.e., the air flow through the PTE to the control device was always maintained under negative pressure even when all additional egress points (non-natural draft openings) which could affect the PTE were opened) in lieu of installing, maintaining and operating monitoring devices and a recorder which simultaneously measure and record the pressure inside and outside the PTE.

If the PTE can not be compromised, under normal plant conditions, when the emissions unit is in operation, the permittee will not be required to comply with the differential pressure operational restriction, monitoring, record keeping, and reporting requirements specified below to ensure the ongoing integrity of the PTE.

If the permittee elects not to perform the additional demonstration specified in Section A.I.2.b to show that the PTE can not be compromised or the additional demonstration indicates that the PTE can be compromised, the permittee will be required to comply with the differential pressure operational restriction, monitoring, record keeping, and reporting requirements specified below (see Sections A.II, A.III, and A.IV below) to ensure the ongoing integrity of the PTE.

II. Operational Restrictions

1. The use of photochemically reactive materials, as defined in OAC rule 3745-21-01 (C)(5), in this emissions unit is prohibited.
2. The average temperature of the combustion chamber within the regenerative thermal oxidizer , for any 3-hour period while the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The permanent total enclosure shall be maintained under negative pressure, at a minimum pressure differential that is not less than the minimum pressure differential (inches of water) established during the most recent emissions test that demonstrated the emissions unit was in compliance, whenever this emissions unit is in operation.
4. The permittee shall ensure that all inspection ports are closed whenever this emissions unit is in operation.
5. The permanent total enclosure (PTE)* serving this emissions unit shall be installed and operated in accordance with 40 CFR Part 51, Appendix M, Method 204, whenever the emissions unit is in operation. The PTE shall meet the following criteria:
 - a. any "Natural Draft Opening" (NDO)* shall be at least 4 equivalent diameters from each OC emission point;
 - b. the total area of all NDOs shall not exceed 5% of the surface area of the enclosure's four walls, floor and ceiling;
 - c. the average facial velocity (FV) of air through all NDOs shall be at least 3,600 m/hr (200 fpm) which corresponds to a pressure differential of 0.007 inches of water. The direction of air through all NDOs shall be into the enclosure;

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- d. all access doors and windows whose areas are not included in paragraph (b) and are not included in the calculation in paragraph (c) shall be closed during routine operation; and
- e. all OC emissions must be captured and contained for discharge through the OC control device.

By satisfying the criteria above for establishing permanent total enclosure, the total organic capture efficiency shall be assumed to be 100%.

* Definitions for PTE and NDO:

Permanent Total Enclosure (PTE) - a permanently installed enclosure that completely surrounds a source of emissions such that all OC emissions are captured and contained for discharge through a control device.

Natural Draft Opening (NDO) - any permanent opening in the enclosure that remains open during operation of the facility and is not connected to a duct to which a fan is installed.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each day for this emissions unit:
 - a. The number of pounds of frit vehicle mixed and employed.
 - b. The number of pounds of frit vehicle accounted for as waste.
 - c. The organic compound content of the frit vehicle, in percent by weight.
 - d. The number of pounds of cleanup employed.
 - e. The organic compound content of the cleanup, in percent by weight.
 - f. The total organic compound emission rate for the frit drying tunnel, in pounds per day, including cleanup.
2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the regenerative thermal oxidizer 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 installed, calibrated, operated and maintained in

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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 regenerative thermal oxidizer, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall install, maintain and operate monitoring devices and a recorder which simultaneously measure the pressure inside and outside the permanent total enclosure and records the differential pressure. The monitoring and recording devices shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall maintain records of all 3-hour blocks of time during which the permanent total enclosure was not maintained at or above the minimum pressure differential (inches of water), established during the most recent emissions test that demonstrated the emissions unit was in compliance, whenever this emissions unit is in operation.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which include the following information, an identification of each day during which the total organic compound emissions exceeded 5.55 pounds per day, excluding cleanup and the actual organic compound emissions for each such day.
2. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the regenerative thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature that was observed during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The permittee shall submit pressure differential deviation (excursion) reports that identify all 3-hour blocks of time during which the permanent total enclosure was not maintained at the required differential pressure specified above.
4. The permittee shall submit deviation (excursion) reports, in accordance with paragraph I.A.2 of the General Terms and Conditions of this permit.

V. Testing Requirements

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1. Compliance with the emission limitation(s) in section A.I.1. of these terms and conditions shall be determined in accordance with the following method(s):
 - a. Emission Limitation-
5.55 lbs/day OC

Applicable Compliance Method-
Compliance shall be based upon the records maintained in section A.III.1. and the following equation used to determine the lbs OC/day allowable emission rate.

$$X = (0.65)(1 - a)y_b + (1 - 0.65)y_b - 0.13y_b - 0.18y_b - 0.04y_b$$

Where:

a = percent destruction efficiency as determined during the most recent stack test
 b = OC content of frit vehicle (% by weight)
 y = lbs of frit vehicle mixed/day - lbs of frit vehicle accounted for as waste/day
 X = lbs OC emissions/day
 0.65 = the percent of material lost from the drying tunnel and subsequently captured and controlled
 (1 - 0.65) = the percent of material lost from the drying tunnel as fugitive
 0.13 = the percent of material lost during frit mixing
 0.18 = the percent of material lost during frit application
 0.04 = the percent of material lost in the frit oven

[Note: 65% + 0.13% + 18% + 4% = 100%]
 - b. Emission Limitation-
1.0 TPY OC

Applicable Compliance Method-
Compliance shall be based upon the daily emission rate as determined in V.1.a. multiplied by 365 days/yr and divided by 2000 lbs/ton.
2. Formulation data or USEPA Method 24 shall be used to determine the organic compound contents of the coatings.
3. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

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Emissions Unit ID: K021

- a. The emission testing shall be conducted within six months of the issuance of this permit.
- b. The emission testing shall be conducted to demonstrate compliance with the overall control system efficiency for OCs, which will be determined as the product of the capture efficiency and the control efficiency of the regenerative thermal oxidizer.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

The capture efficiency will be determined using the test methods specified in 40 CFR Part 51, Appendix M, Method 204 through 204F, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency as specified in the USEPA

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Guidelines for Determining Capture Efficiency, dated January 9, 1995. Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement. The control efficiency of the regenerative thermal oxidizer shall be conducted in accordance with the test methods and procedures specified in OAC rule 3745-21-10 and shall measure the percent reduction in mass emissions of organic compounds or organic materials between the inlet and outlet of the vapor control system.

- d. The test(s) shall be conducted while emissions unit K021 is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

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

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

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

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
K021 - Frit Drying Tunnel with Permanent Total Enclosure vented to a Regenerative Thermal Oxidizer (RTO); E-505/E-507	Reference Additional Terms and Conditions	None

2. Additional Terms and Conditions

- 2.a The permittee shall be in compliance with Ohio EPA’s Air Toxic Policy.

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that a changed emissions unit will still satisfy the Air Toxic Policy:
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the Air Toxic Policy; and,
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

1. The permit to install for this emissions unit was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system 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 Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: amyl acetate

TLV (ug/m³): 532,000

Maximum Hourly Emission Rate (lbs/hr): 0.23

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 4.17

MAGLC (ug/m³): 5320

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

- a. changes in the composition of the materials used (typically for coatings or cleanup

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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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is(are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
P020 - Lacquer Mixing with Permanent Total Enclosure vented to Fume Concentrator and Catalytic Incinerator; *Modification	OAC rule 3745-31-05 (A)(3) OAC rule 3745-21-07 (G)(2)	0.57 lb/hr organic compound (OC), 13.77 lbs/day OC, 2.51 TPY OC The limitations based on this rule are less stringent than required by OAC rule 3745-31-05 (A)(3).

2. Additional Terms and Conditions

- 2.a The hourly emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limits.
- 2.b The organic compound (OC) emissions from this emissions unit, shall be controlled through the application of a permanent total enclosure (PTE) for 100% capture and a fume concentrator and catalytic incinerator system, operating at a minimum of 90% control OC efficiency.

The organic compound emission control system is common to emissions units K001, K002, and P020.

- 2.c The permittee has the option to perform an additional demonstration to show that the PTE can not be compromised, under normal plant conditions, when the emissions unit is in operation (i.e., the air flow through the PTE to the control device was always maintained under negative pressure even when all additional egress points (non-natural draft openings) which could affect the PTE were opened) in lieu of installing, maintaining and operating monitoring devices and a recorder which simultaneously measure and record the pressure inside and outside the PTE.

If the PTE can not be compromised, under normal plant conditions, when the emissions

unit is in operation, the permittee will not be required to comply with the differential pressure operational restriction, monitoring, record keeping, and reporting requirements specified below to ensure the ongoing integrity of the PTE.

If the permittee elects not to perform the additional demonstration specified in Section A.I.2.c. to show that the PTE can not be compromised or the additional demonstration indicates that the PTE can be compromised, the permittee will be required to comply with the differential pressure operational restriction, monitoring, record keeping, and reporting requirements specified below (see Sections A.II, A.III, and A.IV below) to ensure the ongoing integrity of the PTE.

II. Operational Restrictions

1. The average temperature of the exhaust gases at the inlet to the catalytic incinerator (immediately before the catalyst bed), for any 3-hour block of time, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
2. The permanent total enclosure shall be maintained under negative pressure, at a minimum pressure differential that is not less than the minimum pressure differential (inches of water), established during the most recent emissions test that demonstrated the emissions unit was in compliance, whenever this emissions unit is in operation.
3. The permanent total enclosure (PTE)* serving this emissions unit shall be installed and operated in accordance with 40 CFR Part 51, Appendix M, Method 204, whenever the emissions unit is in operation. The PTE shall meet the following criteria:
 - a. any "Natural Draft Opening" (NDO)* shall be at least 4 equivalent diameters from each OC emission point;
 - b. the total area of all NDOs shall not exceed 5% of the surface area of the enclosure's four walls, floor and ceiling;
 - c. the average facial velocity (FV) of air through all NDOs shall be at least 3,600 m/hr (200 fpm) which corresponds to a pressure differential of 0.007 inches of water. The direction of air through all NDOs shall be into the enclosure;
 - d. all access doors and windows whose areas are not included in paragraph (b) and are not included in the calculation in paragraph (c) shall be closed during routine operation; and,

- e. all OC emissions must be captured and contained for discharge through the OC control device.

By satisfying the criteria above for establishing permanent total enclosure, the total organic capture efficiency shall be assumed to be 100%.

* Definitions for PTE and NDO:

Permanent Total Enclosure (PTE) - a permanently installed enclosure that completely surrounds a source of emissions such that all OC emissions are captured and contained for discharge through a control device.

Natural Draft Opening (NDO) - any permanent opening in the enclosure that remains open during operation of the facility and is not connected to a duct to which a fan is installed.

4. The average temperature of the desorption air stream prior to the fume concentrator, for any 3-hour block of time, 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.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each day for this emissions unit:
 - a. The amount of toluene mixed, in pounds.
 - b. The amount of solids mixed, in pounds.
2. The permittee shall operate and maintain continuous temperature monitors and recorders that measure and record the temperature at the following points when the emissions unit is in operation:
 - a. the temperature of the exhaust gases at the inlet to the catalytic incinerator (immediately before the catalyst bed); and,
 - b. the temperature of the desorption air stream prior to the OC concentrator.

Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within 1 percent of the temperature being measured or 5 degrees Fahrenheit, whichever is greater. The temperature monitors and recorders shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the average temperature from the monitoring points listed in a and b above for each of the 8 3-hour blocks during the day. The permittee also shall maintain a

log or record of operating time for the capture (collection) system, control devices, monitoring equipment, and the associated emissions unit.

3. The permittee shall install, maintain and operate monitoring devices and a recorder which simultaneously measures the pressure inside and outside the permanent total enclosure and records the differential pressure. The monitoring and recording devices shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall maintain records of all 3-hour blocks of time during which the permanent total enclosure was not maintained at or above the minimum pressure differential (inches of water), established during the most recent emissions test that demonstrated the emissions unit was in compliance, whenever this emissions unit is in operation.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which include the following information, an identification of each day during which the total organic compound emissions exceeded 13.77 pounds per day, excluding cleanup and the actual organic compound emissions for each such day.
2. The permittee shall submit quarterly temperature deviation (excursion) reports that identify:
 - a. all 3-hour blocks of time during which the average temperature of the desorption air stream prior to the OC concentrator wheel, was more than 50 degrees Fahrenheit below the average temperature that was observed during the most recent emissions test that demonstrated the emissions unit was in compliance; and,
 - b. all 3-hour blocks of time during which the average temperature of the exhaust gases at the inlet to the catalytic incinerator (immediately before the catalyst bed) was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The permittee shall submit pressure differential deviation (excursion) reports that identify all 3-hour blocks of time during which the permanent total enclosure was not maintained at the required differential pressure specified above.
4. The permittee shall submit deviation (excursion) reports, in accordance with paragraph I.A.2 of the General Terms and Conditions of this permit.

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5. The permittee shall also submit annual reports to the Director (appropriate Ohio EPA District Office or local air agency) which specify the total organic compound emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation-
0.57 lb/hr OC

Applicable Compliance Method-

This OC limitation was determined in the following manner:

$$(2,754 \text{ lbs OC/day})(0.05)(1 - 0.90) (\text{day}/24 \text{ hrs})$$

- b. Emission Limitation-
13.6 lbs/day OC

Applicable Compliance Method-

Compliance shall be based upon the records maintained in Section A.III.1. and the following equation used to determine the lbs OC/day allowable emission rate.

$$X = (a)(b)(1 - c)$$

Where:

X = lbs OC emissions/day

a = toluene input, in pounds (as determined from Section A.III.1.)

b = 5% evaporation loss during lacquer mixing

c = overall control efficiency as determined during the most recent stack test

- c. Emission Limitation-
2.51 TPY OC

Applicable Compliance Method-

Compliance shall be based upon the daily calculated emission rate multiplied by 365 days/yr and divided by 2000 lbs/ton.

2. Formulation data or USEPA Method 24 shall be used to determine the organic compound contents of the coatings.
3. The permittee shall conduct, or have conducted, emission testing for this emissions unit in

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accordance with the following requirements:

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- a. The emission testing shall be conducted within six months of the issuance of this permit.
- b. The emission testing shall be conducted to demonstrate compliance with the overall control system efficiency for OCs which will be determined as the product of the capture efficiency and the overall control efficiency of the fume concentrator and catalytic oxidation system.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

The capture efficiency will be determined using the test methods specified in 40 CFR Part 51, Appendix M, Method 204 through 204F, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency as specified in the USEPA Guidelines for Determining Capture Efficiency, dated January 9, 1995. Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement. The control efficiency of the fume concentrator and catalytic oxidation system shall be conducted in accordance with the test methods and procedures specified in OAC rule 3745-21-10 and shall measure the percent reduction in mass emissions of organic compounds or organic materials between the inlet and outlet of the vapor control system. For purposes of this testing, the sampling shall be conducted at the inlet stream to the vapor control system (prior to the concentrator inlet) and the exhaust stack of the vapor control system (after combining of the outlet stream from the thermal oxidizer and the outlet stream of the concentrator).

- d. The test(s) shall be conducted while emissions unit P020 is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

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

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

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characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

VI. Miscellaneous Requirements

1. *This PTI is a modification of emissions unit P020 permitted with PTI 08-3786 issued on March 4, 1998. This modification represents the following increase in emission rates from that previously permitted: +0.17 lb/hr OC, +4.12 lbs/day OC, +.75 TPY OC.

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B. State Only Enforceable Section

I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
P020 - Lacquer Mixing with Permanent Total Enclosure vented to Fume Concentrator and Catalytic Incinerator; *Modification	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

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None

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
P041 - Black Matrix (BM) Panel Reclaim; E201-1	OAC rule 3745-31-05 (A)(3) OAC rule 3745-21-07 (G)(2)	1.25 lbs/hr organic compound (OC), 30 lbs/day OC, 5.48 TPY OC The limit based on this rule is less stringent than that required by OAC rule 3745-31-05 (A)(3).

2. Additional Terms and Conditions

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information for each day for the cleaning operation:
 - a. The company identification for each organic compound material employed.
 - b. The number of pounds of each organic compound material employed.
 - c. The total organic compound emission rate for all organic compound materials, in pounds

per day.

- d. The total number of hours the emissions unit was in operation.
- e. The average hourly organic compound emission rate for all organic compound materials, i.e., (c)/(d), in pounds per hour (average).

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the average hourly organic compound emissions from the coatings and photochemically reactive cleanup materials exceeded 1.25 pounds per hour, and the actual average hourly organic compound emissions for each such day.
 - b. An identification of each day during which the organic compound emissions from the coatings and photochemically reactive cleanup materials exceeded 30 pounds per day, and the actual organic compound emissions for each such day.
2. The permittee shall submit deviation (excursion) reports, in accordance with paragraph I.A.2 of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations in section A.1. of these terms and conditions shall be determined in accordance with the following methods:
 - f. Emission Limitation-
1.25 lbs/hr OC

Applicable Compliance Method-
Compliance shall be based upon the record keeping requirements as specified in section A.III. of this permit.
 - b. Emission Limitation-
30 lbs/day OC

Applicable Compliance Method-
Compliance with the daily organic compound emission limit shall be based upon the record keeping requirements contained in Section A.III. of this permit.
 - c. Emission Limitation-
5.48 TPY OC

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Applicable Compliance Method-

Compliance shall be based upon the record keeping requirements as specified in section A.III. and shall be the sum of the 365 daily emission rates for the calendar year.

2. Formulation data or USEPA Method 24 shall be used to determine the organic compound content of the coatings and cleanup materials.

VI. Miscellaneous Requirements

None

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B. State Only Enforceable Section

I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
P041 - Black Matrix (BM) Panel Reclaim; E201-1	Reference Additional Terms and Conditions	None

2. Additional Terms and Conditions

- 2.a The permittee shall be in compliance with Ohio EPA's Air Toxic Policy.

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that a changed emissions unit will still satisfy the Air Toxic Policy:
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the Air Toxic Policy; and,
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

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Emissions Unit ID: P041

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

1. The permit to install for this emissions unit was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system 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 Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 1.25

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 363.8

MAGLC (ug/m³): 17,800

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

- a. changes in the composition of the materials used (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;

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- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

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

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
P042 - Panel Mask Funnel Assembly (PMSF); E-407, Line #4	OAC rule 3745-31-05 (A)(3) OAC rule 3745-21-07 (G)(2)	1.67 lbs/hr organic compounds (OC), 40 lbs/day OC, 7.3 TPY OC The limit based on this rule is less stringent than that required by OAC rule 3745-31-05 (A)(3).

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each organic compound material employed.
 - b. The number of pounds of each organic compound material employed.
 - c. The total organic compound emission rate for all organic compound materials, in pounds

per day.

- d. The total number of hours the emissions unit was in operation.
- e. The average hourly organic compound emission rate for all organic compound materials, i.e., (c)/(d), in pounds per hour (average).

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the average hourly organic compound emissions from the coatings and photochemically reactive cleanup materials exceeded 1.67 pounds per hour, and the actual average hourly organic compound emissions for each such day.
 - b. An identification of each day during which the organic compound emissions from the coatings and photochemically reactive cleanup materials exceeded 40 pounds per day, and the actual organic compound emissions for each such day.
2. The permittee shall submit deviation (excursion) reports, in accordance with paragraph I.A.2 of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations in section A.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation-
1.67 lbs/hr OC

Applicable Compliance Method-
Compliance shall be based upon the record keeping requirements as specified in section A.III. of this permit.
 - b. Emission Limitation-
40 lbs/day OC

Applicable Compliance Method-
Compliance with the daily organic compound emission limit shall be based upon the record

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Emissions Unit ID: P042

keeping requirements contained in Section A.III. of this permit.

- c. Emission Limitation-
7.3 TPY OC

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Applicable Compliance Method-

Compliance shall be based upon the record keeping requirements as specified in section A.III. and shall be the sum of the 365 daily emission rates for the calendar year.

2. Formulation data or USEPA Method 24 shall be used to determine the organic compound content of the coatings and cleanup materials.

VI. Miscellaneous Requirements

None

Modification Issued: 8/6/2002

B. State Only Enforceable Section

I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
P042 - Panel Mask Funnel Assembly (PMSF); E-407	Reference Additional Terms and Conditions	None

2. Additional Terms and Conditions

- 2.a The permittee shall be in compliance with the Ohio EPA's air toxics policy.

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that a changed emissions unit will still satisfy the Air Toxic Policy:
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the Air Toxic Policy; and,
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

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None

V. Testing Requirements

None

VI. Miscellaneous Requirements

1. The permit to install for this emissions unit was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system 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 Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 1.67

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 217.20

MAGLC (ug/m³): 17,800

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

- a. changes in the composition of the materials used (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;

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- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

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

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>	<u>Oven:</u>
P043 - Frit Sealing Natural Gas Fired Oven; 17.76 mmBtu/hr; E-408, Line #4	OAC rule 3745-31-05 (A)(3)	OAC rule 3745-17-07 (A) OAC rule 3745-17-10 (B)
	Frit Sealing: OAC rule 3745-21-07 (G)(1) OAC rule 3745-17-07 (A) OAC rule 3745-17-11 (A)	

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Applicable Emissions
Limitations/Control
Measures

Frit Sealing: 3.0 lb/hr OC, 15 lbs/day OC, 2.74 TPY OC

2.0 lbs/hr particulate emissions, 8.76 TPY particulate emissions

Opacity shall not exceed 5 percent as a 6-minute average

Oven: 2.59 lbs/hr nitrogen oxides (NO_x), 11.34 TPY NO_x;
1.49 lbs/hr carbon monoxide (CO), 6.53 TPY CO;
0.020 lb particulate/mmBtu actual heat input, 0.36 lb/hr particulate emissions (PE), 1.58 TPY PE;

Opacity shall not exceed 5 percent as a 6-minute average.

The limits based on these rules are less stringent than the requirements established by OAC rule 3745-31-05 (A)(3).

The limits based on these rules are less stringent than the requirements established by OAC rule 3745-31-05

(A)(3).

The limit based on this rule is equivalent to that established by OAC rule 3745-31-05 (A)(3).

2. Additional Terms and Conditions

- 2.a** The hourly emission limitations were developed for purposes of this PTI to reflect the potential to emit for the emissions unit. Therefore, it is not necessary to develop record keeping and reporting requirements to ensure compliance with this limit.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each day for this emissions unit:
 - a. The number of pounds of frit vehicle mixed and employed.
 - b. The number of pounds of frit vehicle accounted for as waste.
 - c. The organic compound content of the frit vehicle, in percent by weight.
 - d. The number of pounds of cleanup employed.
 - e. The organic compound content of the cleanup, in percent by weight.
 - f. The total organic compound emission rate for the frit oven, in pounds per day, including cleanup.
 - g. The total number of hours this emissions unit was in operation. (This number should be the same as the number of hours the associated coating operation was in operation.)
 - h. The average hourly organic compound emission rate, i.e., (f)/(g), in pounds per hour (average).

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2. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the average hourly organic compound emissions exceeded 0.14 pound per hour, and the actual average hourly organic compound emissions for each such day.
 - b. An identification of each day during which the organic compound emissions exceeded 3.36 pounds per day, and the actual organic compound emissions for each such day.
2. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas, was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
3. The permittee shall submit deviation (excursion) reports, in accordance with paragraph I.A.2 of the General Terms and Conditions of this permit.

V. Testing Requirements

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

- a. Emission Limitation-
3.0 lbs/hr OC

Applicable Compliance Method-

Compliance shall be based upon the records maintained in section A.III.1. and the following equation used to determine the lbs OC/hr allowable emission rate.

$$X = yb(0.04)/(24 \text{ hours/day})$$

Where:

X = lbs OC/hr

b = lbs of frit vehicle mixed/day - lbs of frit vehicle accounted for as waste/day

y = OC content of frit vehicle (% by weight)

- b. Emission Limitation-
15 lbs/day OC

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Applicable Compliance Method-

Compliance shall be based upon the records maintained in section A.III.1. and the following equation used to determine the lbs OC/hr allowable emission rate.

$$X = yb(0.04)$$

Where:

$$X = \text{lbs OC/day}$$

$$b = \text{OC content of frit vehicle (\% by weight)}$$

$$y = \text{lbs of frit vehicle mixed/day} - \text{lbs of frit vehicle accounted for as waste/day}$$

- c. Emission Limitation-
2.74 TPY OC

Applicable Compliance Method-

Compliance shall be determined by multiplying the daily emission rate as calculated above by 365 days/yr and dividing by 2000 lbs/ton.

- d. Emission Limitation-
2.0 lbs/hr PE

Applicable Compliance Method-

The hourly emission limitation was determined in the following manner. If required, compliance with this limit will be determined through visible emission evaluations.

$$(100 \text{ bulbs processed/hr})(0.02^*)(1 \text{ lb PE/broken bulb}) = 2.0 \text{ lbs PE/hr}$$

*assume 2% bulb breakage during processing

- e. Emission Limitation-
8.76 TPY PE

Applicable Compliance Method-

The TPY emission limitation was determined by multiplying the hourly emission limitation by 8760 hrs/yr and dividing by 2000 lbs/ton. If required, compliance with this limit will be determined through visible emission evaluations.

- f. Emission Limitation-
2.59 lbs/hr NO_x

Applicable Compliance Method-

Compliance shall be determined by multiplying the maximum rated capacity of the unit (17.76 mmBtu/hr) by the manufacturer's emission factor of 0.146 lb NO_x /mmBtu.

- g. Emission Limitation-
11.34 TPY NO_x

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Applicable Compliance Method-

Compliance shall be determined by multiplying the hourly emission rate of 2.59 lbs NO_x by 8760 hrs/yr and dividing by 2000 lbs/ton.

- h. Emission Limitation-
1.49 lbs/hr CO

Applicable Compliance Method-

Compliance shall be determined by multiplying the maximum rated capacity of the unit (17.76 mmBtu/hr) by the AP-42 emission factor given in Table 1.4-1 (7/98) of 0.084 lb CO/mmBtu.

- i. Emission Limitation-
6.53 TPY CO

Applicable Compliance Method-

Compliance shall be determined by multiplying the hourly emission rate of 1.49 lbs CO by 8760 hrs/yr and dividing by 2000 lbs/ton.

- j. Emission Limitation-
0.020 lb particulate/mmBtu actual heat input

Applicable Compliance Method-

Compliance shall be determined by multiplying the hourly gas burning capacity of the emissions unit (0.01776 million cubic feet/hr) by the AP-42 emission factor for natural gas (7.6 lbs particulate/mm cubic feet), and dividing by the maximum hourly heat input capacity of the emissions unit (17.76 mmBtu/hr).

- k. Emission Limitation-
0.36 lb/hr PE

Applicable Compliance Method-

Compliance shall be determined by multiplying the maximum rated capacity of the unit (17.76 mmBtu/hr) by the AP-42 emission factor given in Table 1.4-2 (7/98) of 0.0076 lb PE/mmBtu.

- l. Emission Limitation-
1.58 TPY PE

Applicable Compliance Method-

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Compliance shall be determined by multiplying the hourly emission rate of 0.36 lb PE by 8760 hrs/yr and dividing by 2000 lbs/ton.

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- m. Emission Limitation-
For Frit Sealing and Oven: Opacity shall not exceed 5 percent as a 6-minute average

Applicable Compliance Method-

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03 (B)(1) using the tests and procedures specified in USEPA Reference Method 9.

- 2. Formulation data or USEPA Method 24 shall be used to determine the organic compound contents of the coatings.

VI. Miscellaneous Requirements

None

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B. State Only Enforceable Section

I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
P043 - Frit Sealing Natural Gas Fired Oven; 17.76 mmBtu/hr; E-408, Line #4	Reference Additional Terms and Conditions	None

2. Additional Terms and Conditions

- 2.a The permittee shall be in compliance with Ohio EPA's Air Toxic Policy.

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that a changed emissions unit will still satisfy the Air Toxic Policy:
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the Air Toxic Policy; and,
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

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None

V. Testing Requirements

None

VI. Miscellaneous Requirements

1. The permit to install for this emissions unit was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system 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 Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: amyl acetate

TLV (ug/m³):532,000

Maximum Hourly Emission Rate (lbs/hr): 3.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 28.37

MAGLC (ug/m³): 5320

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

- a. changes in the composition of the materials used (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;

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- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

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

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
P044 - Tube Process; Final Inspection E-807	OAC rule 3745-31-05 (A)(3)	0.63 lb/hr organic compound (OC), 15 lbs/day OC, 2.74 TPY OC
	OAC rule 3745-21-07 (G)(2)	The limit based on this rule is less stringent than that required by OAC rule 3745-31-05 (A)(3).

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information for each day for the coating operation:
 - a. The company identification for each organic compound material employed.
 - b. The number of pounds of each organic compound material employed.
 - c. The total organic compound emission rate for all organic compound materials, in pounds

per day.

- d. The total number of hours the emissions unit was in operation.
- e. The average hourly organic compound emission rates for all organic compound materials, i.e., (c)/(d), in pounds per hour (average).

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the average hourly organic compound emissions from the coatings and photochemically reactive cleanup materials exceeded 0.63 pound per hour, and the actual average hourly organic compound emissions for each such day.
 - b. An identification of each day during which the organic compound emissions from the coatings and photochemically reactive cleanup materials exceeded 15 pounds per day, and the actual organic compound emissions for each such day.
2. The permittee shall submit deviation (excursion) reports, in accordance with paragraph I.A.2 of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations in section A.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation-
0.63 lb/hr OC

Applicable Compliance Method-
Compliance shall be based upon the record keeping requirements as specified in section A.III. of this permit.
 - b. Emission Limitation-
15 lbs/day OC

Applicable Compliance Method-
Compliance with the daily organic compound emission limit shall be based upon the record

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keeping requirements contained in Section A.III. of this permit.

- c. Emission Limitation-
2.74 TPY OC

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Applicable Compliance Method-

Compliance shall be based upon the record keeping requirements as specified in section A.III. and shall be the sum of the 365 daily emission rates for the calendar year.

2. Formulation data or USEPA Method 24 shall be used to determine the organic compound content of the coatings and cleanup materials.

VI. Miscellaneous Requirements

None

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B. State Only Enforceable Section

I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
P044 - Tube Process; Final Inspection E-807	Reference Additional Terms and Conditions	None

2. Additional Terms and Conditions

- 2.a The permittee shall be in compliance with Ohio EPA's Air Toxic Policy.

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that a changed emissions unit will still satisfy the Air Toxic Policy:
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the Air Toxic Policy; and,
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

IV. Reporting Requirements

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Emissions Unit ID: P044

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

1. The permit to install for this emissions unit was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system 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 Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: acetone

TLV (ug/m³): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 0.63

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 161

MAGLC (ug/m³): 17,800

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

- a. changes in the composition of the materials used (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;

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- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

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