



State of Ohio Environmental Protection Agency

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

CERTIFIED MAIL

Street Address:

122 S. Front Street

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

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049

Application No: 14-04938

DATE: 3/5/2002

Mitsubishi Electric Automotive Inc
Steve Vigil
4773 Bethany Road
Mason, OH 45040

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

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

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

Environmental Review Appeals Commission
236 East Town Street, Room 300
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo, Manager
Field Operations and Permit Section
Division of Air Pollution Control

cc: USEPA

HCDES



**Permit To Install
Terms and Conditions**

**Issue Date: 3/5/2002
Effective Date: 3/5/2002**

FINAL PERMIT TO INSTALL 14-04938

Application Number: 14-04938
APS Premise Number: 1483090295
Permit Fee: **\$0**
Name of Facility: Mitsubishi Electric Automotive Inc
Person to Contact: Steve Vigil
Address: 4773 Bethany Road
Mason, OH 45040

Location of proposed air contaminant source(s) [emissions unit(s)]:
**4773 Bethany Road
Mason, Ohio**

Description of proposed emissions unit(s):
Administrative Modification to PTI 14-04938 issued on 6/21/00 for the inclusion of HAPs emissions limits and recordkeeping/reporting; Synthetic Minor status.

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

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

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

3. Records Retention Requirements

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

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized

representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

5. Scheduled Maintenance/Malfunction Reporting

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

6. Permit Transfers

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

7. Air Pollution Nuisance

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

8. Termination of Permit to Install

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

9. Construction of New Sources(s)

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

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Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

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

10. Public Disclosure

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

11. Applicability

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

12. Best Available Technology

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

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

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

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14. Construction Compliance Certification

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

15. Fees

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

B. Permit to Install Summary of Allowable Emissions

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC	13.45
HAP	9.9
HAPs	24.9

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K001 - Armature Winding Coater controlled with a Catalytic Oxidizer - Modification	OAC rule 3745-31-05(A)(3)	0.75 lb VOC/hr for coatings only 3.7 TPY VOC including cleanup
		See Sections A.2.2.a., A.2.2.b. and A.2.2.g.
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-35-07(B) and 3745-21-09(B)(6).
	OAC rule 3745-35-07(B)	See Section A.2.2.f.
	OAC rule 3745-21-09(B)(6)	See Section A.2.2.c

2. Additional Terms and Conditions

- 2.a The VOC content as applied for the varnish employed in this emissions unit shall not exceed 2.6 pounds of VOC per gallon of varnish.
- 2.b The VOC content of the cleanup material employed in this emissions unit shall not exceed 7.32 pounds of VOC per gallon.
- 2.c When applying coatings, the permittee shall operate a catalytic oxidizer with an overall control efficiency which is at least 81% by weight and a destruction efficiency which is at least 90% by weight.
- 2.d The hourly emission limitation outlined above is based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with this

limit.

- 2.e Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the VOC content limitations, usage limitations, the use of a catalytic oxidizer and compliance with the air toxics policy.
- 2.f The total allowable usage of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from this facility shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on rolling, 12-month summations.
- 2.g The OC emissions from this emissions unit shall be controlled through the application of a permanent total enclosure with a 100% capture efficiency.

B. Operational Restrictions

1. The maximum annual coating and cleanup material usage for this emissions unit shall not exceed 10,757 gallons for coatings and 264 gallons for cleanup materials.
2. The average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The average temperature difference across the catalyst bed at maximum operating capacity, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.
4. 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

Emissions Unit ID: **K001**

fpm) which corresponds to a pressure differential of 0.007 inch of water, and 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 vented to the OC control devices.

By satisfying the above criteria for a permanent total enclosure, the OC 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.

- 5. The permanent total enclosure shall be maintained under negative pressure, at a minimum pressure differential that is not less than 0.007 inch of water, as a 3-hour average, whenever the emissions unit is in operation.

C. Monitoring and/or Recordkeeping Requirements

- 1. The permittee shall collect and record the following information each month for this emissions unit:
 - 1. The name and identification of each coating (varnish) and cleanup material employed;
 - 2. The VOC content of each coating and cleanup material, in pounds per gallon, as applied;
 - 3. The number of gallons of each coating and cleanup material employed; and,
 - 4. The total VOC emissions from all coatings and cleanup materials employed, in pounds or tons [b x c x (1- overall control efficiency)].
- 2. The permittee shall operate and maintain continuous temperature monitors and recorder(s) which measure and record(s) the temperature immediately upstream and downstream of the incinerator's catalyst bed 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 monitors and recorder(s) 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 each day:

- a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases 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.
 - b. All 3-hour blocks of time (when the emissions unit was in operation at maximum operating capacity) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.
 - c. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation and the control device was required to be operated.
3. The permit to install for this emissions unit K001 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

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

Pollutant: Styrene

TLV (ug/m3): 85,202

Maximum Hourly Emission Rate (lbs/hr): 2.0 (Emissions units K001, K002 and K008)

Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m3): 71.1

MAGLC (ug/m3): 2029

Physical changes to or in the method of operation of the emissions unit after its installation or

Emissions Unit ID: **K001**

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

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

If the permittee determines that the "Air Toxic Policy" will be satisfied with 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.

4. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will satisfy the Air Toxic Policy:"
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. when the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.
5. The permittee shall collect and record the following information each month for the entire facility:
 - a. the name and identification number of each coating, employed;
 - b. the individual Hazardous Air Pollutant (HAP) content for each HAP of each coating in

- pounds of individual HAP per gallon of coating, as applied;
- c. the total combined HAP content of each coating in pounds of combined HAPs per gallon of coating, as applied [sum all the individual HAP contents from (b)];
 - d. the number of gallons of each coating employed;
 - e. the name and identification of each cleanup material employed;
 - f. the individual HAP content for each HAP of each cleanup material, in pounds of individual HAP per gallon of cleanup material, as applied;
 - g. the total combined HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum all the individual HAP contents from (f)];
 - h. the number of gallons of each cleanup material employed;
 - i. the total individual HAP usage for each HAP from all coatings and cleanup materials employed, in pounds or tons per month [for each HAP the sum of (b) times (d) for each coating plus the sum of (f) times (h) for each cleanup material];
 - j. the total combined HAP usage from all coatings and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) for each coating plus the sum of (g) times (h) for each cleanup material];
 - k. the updated rolling, 12-month summation of usage for each individual HAP emissions**, in tons. This shall include the information for the current month and the preceeding eleven calender months {for each HAP, the sum of [(b) times (d) plus the sum of (f) times (h)] x [1- overall control efficiency]}. For calculating styrene emissions from coatings containing styrene, use an emission factor of 0.52 lb styrene emitted/lb styrene input in the above calculation.
 - l. the updated rolling, 12-month summation of usage for total combined HAP emissions**, in tons[(the summation of each individual HAP emission from (k) above]. This shall include the information for the current month and the preceeding eleven calender months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a individual emissions unit basis.

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** Assume that styrene is emitted at 52% of the total amount of styrene used (Composite Fabricators Association, 1997) .

Assume that all HAP(s), other than styrene, are emitted at rates the same as the amount of HAP(s) used.

6. The permittee shall maintain and operate monitoring devices and a recorder that simultaneously measure and record the pressure inside and outside the permanent total enclosure. The monitoring and recording devices shall be 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 of 0.007 inch of water, as a 3-hour average.

D. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any monthly record showing the use of noncomplying coatings (inks or varnishes) or cleanup materials. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 30 days following the end of the calendar month.
2. The permittee shall submit deviation (excursion) reports that identify the following:
 - a. All 3-hour blocks of time when the emissions unit was in operation during which the average temperature of the exhaust gases immediately before the catalyst bed does not comply with the temperature limitations in section B.2; and
 - b. All 3-hour blocks of time when the emissions unit was in operation at maximum capacity during which or the average temperature difference across the catalyst bed does not comply with the temperature limitations in section B.3.
3. The permittee shall submit annual reports which identify any exceedances of the annual coating and/or cleanup material usage limitation in section B.1., as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year.
4. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.
5. The permittee shall submit deviation (excursion) reports which identify any exceedance of the HAP emissions limitations set forth in term A.2.2.f. If no exceedances occurred during the reporting period then a report is required stating so.
6. The permittee shall submit quarterly pressure differential deviation (excursion) reports that identify all 3-hour blocks of time during which the permanent total enclosure was not maintained at the minimum pressure differential of 0.007 inch of water, as a 3-hour average.

E. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 6 months after issuance of this permit.

- b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency and destruction efficiency limitations for VOC.
- c. The test method(s) which must be employed to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC are specified below. Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.

Method 25, 40 CFR Part 60, Appendix A

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

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

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

2. USEPA methods 24 and 24A shall be used to determine the VOC content for (a) coatings and (b) flexographic and rotogravure printing lines and related coatings, respectively. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 or 24A cannot be used for a particular coating or ink, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating or ink to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A. In lieu of Method 24, the permittee can use Method D6053-96 for any electrical insulating varnishes.
3. Compliance with the usage limitations in section B.1 shall be demonstrated by the record keeping in section C.1.
4. Compliance with the temperature restriction in section B.2 and B.3 shall be demonstrated by the record keeping in section C.2.
5. Compliance with the HAPs emissions limitations in section A.2.2.f. shall be demonstrated by the recordkeeping requirements in section C.4.
6. Compliance with the permanent total enclosure requirements specified in sections A.2.2.g., B.4. and B.5. shall be demonstrated by the recordkeeping requirements specified in section C.5.

F. Miscellaneous Requirements

1. The terms and conditions of this permit to install shall supersede the terms and conditions of permit to install number 14-3988 for emissions unit K001.
2. The following terms and conditions of this permit are federally enforceable: A., B., C.1., C.2., C.4., C.5., D., E. and F.1.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K002 - Stator Winding Coater controlled with a Catalytic Oxidizer -Modification	OAC rule 3745-31-05(A)(3)	0.52 lb VOC/hr for coatings only 4.13 TPY VOC including cleanup
		See Sections A2.2.a., A.2.2.b. and A.2.2.g.
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-35-07(B) and 3745-21-09(B)(6).
	OAC rule 3745-35-07(B)	See Section A.2.2.f.
	OAC rule 3745-21-09(B)(6)	See Section A.2.2.c

2. Additional Terms and Conditions

- 2.a The VOC content as applied for the non-styrene varnish employed in this emissions unit shall not exceed 7.3 pounds of VOC per gallon of varnish and for styrene containing varnish 2.4 pounds of VOC per gallon of varnish, as applied.
- 2.b The VOC content of the cleanup material shall not exceed 7.32 pounds of VOC per gallon.
- 2.c When applying coatings, the permittee shall operate a catalytic oxidizer with an overall control efficiency which is at least 81% by weight and a destruction efficiency which is at

least 90% by weight.

- 2.d** The hourly emission limitation outlined above is based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with this limit.
- 2.e** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the VOC content limitations, usage limitations, the use of a catalytic oxidizer and compliance with the air toxics policy.
- 2.f** The total allowable usage of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from this facility shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on rolling, 12-month summations.
- 2.g** The OC emissions from this emissions unit shall be controlled through the application of a permanent total enclosure with a 100% capture efficiency.

B. Operational Restrictions

1. The maximum annual coating usage for this emissions unit shall not exceed 7984 gallons for styrene varnishes and 1920 gallons per year for the non-styrene varnishes. The annual cleanup material usage for this emissions unit shall not exceed 264 gallons for cleanup materials.
2. The average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The average temperature difference across the catalyst bed at maximum operating capacity, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.
4. 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 inch of water, and 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 vented to the OC control devices.

By satisfying the above criteria for a permanent total enclosure, the OC 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.

5. The permanent total enclosure shall be maintained under negative pressure, at a minimum pressure differential that is not less than 0.007 inch of water, as a 3-hour average, whenever the emissions unit is in operation.

C. Monitoring and/or Recordkeeping Requirements

- 1 The permittee shall collect and record the following information each month for this emissions unit:
 - a. The name and identification of each coating (styrene and non-styrene varnish) and cleanup material employed;
 - b. The VOC content of each coating and cleanup material, in pounds per gallon, as applied;
 - c. The number of gallons of each coating (styrene and non-styrene varnish) and cleanup material employed; and

- d. The total VOC emissions from all coatings and cleanup materials employed, in pounds or tons [b x c x (1- overall control efficiency)].

2. The permittee shall operate and maintain continuous temperature monitors and recorder(s) which measure and record(s) the temperature immediately upstream and downstream of the incinerator's catalyst bed 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 monitors and recorder(s) 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 each day:

- a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases 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.
 - b. All 3-hour blocks of time (when the emissions unit was in operation at maximum operating capacity) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.
 - c. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation and the control device was required to be operated.
3. The permit to install for this emissions unit K002 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

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

Pollutant: Styrene

TLV (ug/m³): 85,202

Maximum Hourly Emission Rate (lbs/hr): 2.0 (Emissions units K001, K002 and K008)

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Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m3): 71.1

MAGLC (ug/m3): 2029

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

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

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

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

that show the results of the application of the "Air Toxic Policy" for the change.

5. The permittee shall collect and record the following information each month for the entire facility:
 - a. the name and identification number of each coating, employed;
 - b. the individual Hazardous Air Pollutant (HAP) content for each HAP of each coating in pounds of individual HAP per gallon of coating, as applied;
 - c. the total combined HAP content of each coating in pounds of combined HAPs per gallon of coating, as applied [sum all the individual HAP contents from (b)];
 - d. the number of gallons of each coating employed;
 - e. the name and identification of each cleanup material employed;
 - f. the individual HAP content for each HAP of each cleanup material, in pounds of individual HAP per gallon of cleanup material, as applied;
 - g. the total combined HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum all the individual HAP contents from (f)];
 - h. the number of gallons of each cleanup material employed;
 - i. the total individual HAP usage for each HAP from all coatings and cleanup materials employed, in pounds or tons per month [for each HAP the sum of (b) times (d) for each coating plus the sum of (f) times (h) for each cleanup material];
 - j. the total combined HAP usage from all coatings and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) for each coating plus the sum of (g) times (h) for each cleanup material];
 - k. the updated rolling, 12-month summation of usage for each individual HAP emissions**, in tons. This shall include the information for the current month and the preceding eleven calendar months {for each HAP, the sum of [(b) times (d) plus the sum of (f) times (h)] x [1- overall control efficiency]}. For calculating styrene emissions from coatings containing styrene, use an emission factor of 0.52 lb styrene emitted/lb styrene input in the above calculation.
 - l. the updated rolling, 12-month summation of usage for total combined HAP emissions**,

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in tons [the summation of each individual HAP emission from (k) above]. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a individual emissions unit basis.

** Assume that styrene is emitted at 52% of the total amount of styrene used (Composite Fabricators Association, 1997) .

Assume that all HAP(s), other than styrene, are emitted at rates the same as the amount of HAP(s) used.

6. The permittee shall maintain and operate monitoring devices and a recorder that simultaneously measure and record the pressure inside and outside the permanent total enclosure. The monitoring and recording devices shall be 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 of 0.007 inch of water, as a 3-hour average.

D. Reporting Requirements

- 1 The permittee shall notify the Hamilton County Department of Environmental Services in writing of any monthly record showing the use of noncomplying coatings (inks or varnishes) or cleanup materials. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 30 days following the end of the calendar month.
2. The permittee shall submit deviation (excursion) reports that identify the following:
 - a. All 3-hour blocks of time when the emissions unit was in operation during which the average temperature of the exhaust gases immediately before the catalyst bed does not comply with the temperature limitations in section B.2; and
 - b. All 3-hour blocks of time when the emissions unit was in operation at maximum capacity during which or the average temperature difference across the catalyst bed does not comply with the temperature limitations in section B.3.
3. The permittee shall submit annual reports which identify any exceedances of the annual coating and/or cleanup material usage limitation in section B.1., as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year.
4. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

5. The permittee shall submit deviation (excursion) reports which identify any exceedance of the HAP emissions limitations set forth in term A.2.2.f. If no exceedances occurred during the reporting period then a report is required stating so.
6. The permittee shall submit quarterly pressure differential deviation (excursion) reports that identify all 3-hour blocks of time during which the permanent total enclosure was not maintained at the minimum pressure differential of 0.007 inch of water, as a 3-hour average.

E. Testing Requirements

- 1 The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 6 months after issuance of this permit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency and destruction efficiency limitations for VOC.
 - c. The test method(s) which must be employed to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC are specified below. Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.

Method 25, 40 CFR Part 60, Appendix A
 - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

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

interfering gases.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

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

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

2. USEPA methods 24 and 24A shall be used to determine the VOC content for (a) coatings and (b) flexographic and rotogravure printing lines and related coatings, respectively. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 or 24A cannot be used for a particular coating or ink, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating or ink to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A. In lieu of Method 24, the permittee can use Method D6053-96 for any electrical insulating varnishes.
3. Compliance with the usage limitations in section B.1 shall be demonstrated by the record keeping in section C.1.
4. Compliance with the temperature restriction in section B.2 and B.3 shall be demonstrated by the record keeping in section C.2.
5. Compliance with the HAPs emissions limitations in section A.2.2.f. shall be demonstrated by the recordkeeping requirements in section C.4.
6. Compliance with the permanent total enclosure requirements specified in sections A.2.2.g., B.4.

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and B.5. shall be demonstrated by the recordkeeping requirements specified in section C.5.

F. Miscellaneous Requirements

1. The terms and conditions of this permit to install shall supersede the terms and conditions of permit to install number 14-1868 for emissions unit K002.
2. The following terms and conditions of this permit are federally enforceable: A., B., C.1., C.2., C.4., C.5., D., E. and F.1.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K005 - Rotor Coater controlled with a Catalytic Oxidizer - Modification	OAC rule 3745-31-05(A)(3)	0.17 lb VOC hr for coatings only 1.04 TPY VOC including cleanup See Sections A.2.2.a., A.2.2.b. and A.2.2.g. The requirements of this rule also include compliance with the requirements of OAC rules 3745-35-07(B) and 3745-21-09(B)(6).
	OAC rule 3745-35-07(B)	See Section A.2.2.f.
	OAC rule 3745-21-09(B)(6)	See Section A.2.2.c

2. Additional Terms and Conditions

- 2a The VOC content as applied for the coatings employed in this emissions unit shall not exceed 6.23 pounds of VOC per gallon of coating.
- 2b The VOC content of the cleanup material employed in this emissions unit shall not exceed 7.32 pounds of VOC per gallon.
- 2c When applying coatings, the permittee shall operate a catalytic oxidizer with an overall control efficiency which is at least 81% by weight and a destruction efficiency which is at

least 90% by weight.

- 2.d** The hourly emission limitation outlined above is based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with this limit.
- 2.e** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the VOC content limitations, usage limitations and the use of a catalytic oxidizer.
- 2.f** The total allowable usage of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from this facility shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on rolling, 12-month summations.
- 2.g** The OC emissions from this emissions unit shall be controlled through the application of a permanent total enclosure with a 100% capture efficiency.

B. Operational Restrictions

1. The maximum annual coating and cleanup material usage for this emissions unit shall not exceed 981 for coatings and 120 gallons for cleanup materials.
2. The average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The average temperature difference across the catalyst bed at maximum operating capacity, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.
4. 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 inch of water, and 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 vented to the OC control devices.

By satisfying the above criteria for a permanent total enclosure, the OC 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.

- 5. The permanent total enclosure shall be maintained under negative pressure, at a minimum pressure differential that is not less than 0.007 inch of water, as a 3-hour average, whenever the emissions unit is in operation.

C. Monitoring and/or Recordkeeping Requirements

- 1. The permittee shall collect and record the following information each month for this emissions unit:
 - a. The name and identification of each coating and cleanup material employed;
 - b. The VOC content of each coating and cleanup material, in pounds per gallon, as applied;
 - c. The number of gallons of each coating and cleanup material employed; and,
 - d. The total VOC emissions from all coatings and cleanup materials employed, in pounds or tons [b x c x (1- overall control efficiency)].
- 2. The permittee shall operate and maintain continuous temperature monitors and recorder(s) which measure and record(s) the temperature immediately upstream and downstream of the incinerator's catalyst bed 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 monitors and recorder(s) shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

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

- a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases 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.
 - b. All 3-hour blocks of time (when the emissions unit was in operation at maximum operating capacity) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.
 - c. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation and the control device was required to be operated.
3. The permittee shall collect and record the following information each month for the entire facility:
- a. the name and identification number of each coating, employed;
 - b. the individual Hazardous Air Pollutant (HAP) content for each HAP of each coating in pounds of individual HAP per gallon of coating, as applied;
 - c. the total combined HAP content of each coating in pounds of combined HAPs per gallon of coating, as applied [sum all the individual HAP contents from (b)];
 - d. the number of gallons of each coating employed;
 - e. the name and identification of each cleanup material employed;
 - f. the individual HAP content for each HAP of each cleanup material, in pounds of individual HAP per gallon of cleanup material, as applied;
 - g. the total combined HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum all the individual HAP contents from (f)];
 - h. the number of gallons of each cleanup material employed;
 - i. the total individual HAP usage for each HAP from all coatings and cleanup materials employed, in pounds or tons per month [for each HAP the sum of (b) times (d) for each coating plus the sum of (f) times (h) for each cleanup material];

- j. the total combined HAP usage from all coatings and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) for each coating plus the sum of (g) times (h) for each cleanup material];
- k. the updated rolling, 12-month summation of usage for each individual HAP emissions**, in tons. This shall include the information for the current month and the preceeding eleven calender months {for each HAP, the sum of [(b) times (d) plus the sum of (f) times (h)] x [1- overall control efficiency]}. For calculating styrene emissions from coatings containing styrene, use an emission factor of 0.52 lb styrene emitted/lb styrene input in the above calculation.
- l. the updated rolling, 12-month summation of usage for total combined HAP emissions**, in tons [the summation of each individual HAP emission from (k) above]. This shall include the information for the current month and the preceeding eleven calender months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a individual emissions unit basis.

** Assume that styrene is emitted at 52% of the total amount of styrene used (Composite Fabricators Association, 1997) .

Assume that all HAP(s), other than styrene, are emitted at rates the same as the amount of HAP(s) used.

- 4. The permittee shall maintain and operate monitoring devices and a recorder that simultaneously measure and record the pressure inside and outside the permanent total enclosure. The monitoring and recording devices shall be 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 of 0.007 inch of water, as a 3-hour average.

D. Reporting Requirements

- 1 The permittee shall notify the Hamilton County Department of Environmental Services in writing of any monthly record showing the use of noncomplying coatings or cleanup materials. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 30 days following the end of the calendar month.

2. The permittee shall submit deviation (excursion) reports that identify the following:
 - a. All 3-hour blocks of time when the emissions unit was in operation during which the average temperature of the exhaust gases immediately before the catalyst bed does not comply with the temperature limitations in section B.2; and
 - b. All 3-hour blocks of time when the emissions unit was in operation at maximum capacity during which or the average temperature difference across the catalyst bed does not comply with the temperature limitations in section B.3.
3. The permittee shall submit annual reports which identify any exceedances of the annual coating and/or cleanup material usage limitation in section B.1., as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year.
4. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

E. Testing Requirements

1. 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 6 months after issuance of this permit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency and destruction efficiency limitations for VOC.
 - c. The test method(s) which must be employed to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC are specified below. Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.

Method 25, 40 CFR Part 60, Appendix A
 - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.
 - e. The capture efficiency shall be determined using Methods 204 through 204F, as specified

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in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

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

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

2. USEPA methods 24 and 24A shall be used to determine the VOC content for (a) coatings and (b) flexographic and rotogravure printing lines and related coatings, respectively. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 or 24A cannot be used for a particular coating or ink, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating or ink to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A. In lieu of Method 24, the permittee can use Method D6053-96 for any electrical insulating varnishes.

3. Compliance with the usage limitations in section B.1 shall be demonstrated by the record keeping in section C.1.
4. Compliance with the temperature restriction in section B.2 and B.3 shall be demonstrated by the record keeping in section C.2.
5. Compliance with the HAPs emissions limitations in section A.2.2.f. shall be demonstrated by the recordkeeping requirements in section C.3.
6. Compliance with the permanent total enclosure requirements specified in sections A.2.2.g., B.4. and B.5. shall be demonstrated by the recordkeeping requirements specified in section C.4.

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F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.
2. The terms and conditions of this permit to install shall supersede the terms and conditions of permit to install number 14-1868 for emissions unit K005.
3. The following terms and conditions of this permit are federally enforceable: A., B., C., D., E. and F.2.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K007 - Stator Core Coater controlled with a Catalytic Oxidizer -Modification	OAC rule 3745-31-05(A)(3)	0.13 lb VOC/hr for coatings only 0.88 TPY VOC including cleanup
		See Sections A.2.2.a., A.2.2.b. and A.2.2.g.
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-35-07(B) and 3745-21-09(B)(6).
	OAC rule 3745-35-07(B)	See Section A.2.2.f.
	OAC rule 3745-21-09(B)(6)	See Section A.2.2.c.

2. Additional Terms and Conditions

- 2.a The VOC content as applied for the coatings employed in this emissions unit shall not exceed 6.23 pounds of VOC per gallon of coating.
- 2.b The VOC content of the cleanup material employed in this emissions unit shall not exceed 7.32 pounds of VOC per gallon.
- 2.c When applying coatings, the permittee shall operate a catalytic oxidizer with an overall control efficiency which is at least 81% by weight and a destruction efficiency which is at

least 90% by weight.

- 2.d** The hourly emission limitation outlined above is based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with this limit.
- 2.e** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the VOC content limitations, usage limitations and the use of a catalytic oxidizer.
- 2.f** The total allowable usage of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from this facility shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on rolling, 12-month summations.
- 2.g** The OC emissions from this emissions unit shall be controlled through the application of a permanent total enclosure with a 100% capture efficiency.

B. Operational Restrictions

- 1 The maximum annual coating and cleanup material usage for this emissions unit shall not exceed 742 gallons for coatings and 120 gallons for cleanup materials.
- 2 The average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The average temperature difference across the catalyst bed at maximum operating capacity, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.
4. 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 inch of water, and 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 vented to the OC control devices.

By satisfying the above criteria for a permanent total enclosure, the OC 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.

- 5. The permanent total enclosure shall be maintained under negative pressure, at a minimum pressure differential that is not less than 0.007 inch of water, as a 3-hour average, whenever the emissions unit is in operation.

C. Monitoring and/or Recordkeeping Requirements

- 1 The permittee shall collect and record the following information each month for this emissions unit:
 - a. The name and identification of each coating and cleanup material employed;
 - b. The VOC content of each coating and cleanup material, in pounds per gallon, as applied;
 - c. The number of gallons of each coating and cleanup material employed; and,
 - d. The total VOC emissions from all coatings and cleanup materials employed, in pounds or tons [b x c x (1- overall control efficiency)].
- 2 The permittee shall operate and maintain continuous temperature monitors and recorder(s) which measure and record(s) the temperature immediately upstream and downstream of the incinerator's catalyst bed 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 monitors and recorder(s) 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 each day:

- a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases 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.
 - b. All 3-hour blocks of time (when the emissions unit was in operation at maximum operating capacity) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.
 - c. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation and the control device was required to be operated. The permittee shall document any time during which the control device is not being operated due to the use of compliance coatings.
3. The permittee shall collect and record the following information each month for the entire facility:
- a. the name and identification number of each coating, employed;
 - b. the individual Hazardous Air Pollutant (HAP) content for each HAP of each coating in pounds of individual HAP per gallon of coating, as applied;
 - c. the total combined HAP content of each coating in pounds of combined HAPs per gallon of coating, as applied [sum all the individual HAP contents from (b)];
 - d. the number of gallons of each coating employed;
 - e. the name and identification of each cleanup material employed;
 - f. the individual HAP content for each HAP of each cleanup material, in pounds of individual HAP per gallon of cleanup material, as applied;
 - g. the total combined HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum all the individual HAP contents from (f)];
 - h. the number of gallons of each cleanup material employed;
 - i. the total individual HAP usage for each HAP from all coatings and cleanup materials

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employed, in pounds or tons per month [for each HAP the sum of (b) times (d) for each coating plus the sum of (f) times (h) for each cleanup material];

- j. the total combined HAP usage from all coatings and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) for each coating plus the sum of (g) times (h) for each cleanup material];
- k. the updated rolling, 12-month summation of usage for each individual HAP emissions**, in tons. This shall include the information for the current month and the preceeding eleven calender months {for each HAP, the sum of [(b) times (d) plus the sum of (f) times (h)] x [1- overall control efficiency]}. For calculating styrene emissions from coatings containing styrene, use an emission factor of 0.52 lb styrene emitted/lb styrene input in the above calculation.
- l. the updated rolling, 12-month summation of usage for total combined HAP emissions**, in tons [the summation of each individual HAP emission from (k) above]. This shall include the information for the current month and the preceeding eleven calender months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a individual emissions unit basis.

** Assume that styrene is emitted at 52% of the total amount of styrene used (Composite Fabricators Association, 1997) .

Assume that all HAP(s), other than styrene, are emitted at rates the same as the amount of HAP(s) used.

- 4. The permittee shall maintain and operate monitoring devices and a recorder that simultaneously measure and record the pressure inside and outside the permanent total enclosure. The monitoring and recording devices shall be 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 of 0.007 inch of water, as a 3-hour average.

D. Reporting Requirements

- 1 The permittee shall notify the Hamilton County Department of Environmental Services in writing of any monthly record showing the use of noncomplying coatings or cleanup materials. The

notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 30 days following the end of the calendar month.

2. The permittee shall submit deviation (excursion) reports that identify the following:
 - a. All 3-hour blocks of time when the emissions unit was in operation during which the average temperature of the exhaust gases immediately before the catalyst bed does not comply with the temperature limitations in section B.2; and
 - b. All 3-hour blocks of time when the emissions unit was in operation at maximum capacity during which or the average temperature difference across the catalyst bed does not comply with the temperature limitations in section B.3.
3. The permittee shall submit annual reports which identify any exceedances of the annual coating and/or cleanup material usage limitation in section B.1., as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year.
4. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.
5. The permittee shall submit deviation (excursion) reports which identify any exceedance of the HAP emissions limitations set forth in term A.2.2.f. If no exceedances occurred during the reporting period then a report is required stating so.
6. The permittee shall submit quarterly pressure differential deviation (excursion) reports that identify all 3-hour blocks of time during which the permanent total enclosure was not maintained at the minimum pressure differential of 0.007 inch of water, as a 3-hour average.

E. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 6 months after issuance of this permit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency and destruction efficiency limitations for VOC.
 - c. The test method(s) which must be employed to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC are specified below. Alternative U.S.

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EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.

Method 25, 40 CFR Part 60, Appendix A

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

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

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

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2. USEPA methods 24 and 24A shall be used to determine the VOC content for (a) coatings and (b) flexographic and rotogravure printing lines and related coatings, respectively. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 or 24A cannot be used for a particular coating or ink, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating or ink to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A. 1. In lieu of Method 24, the permittee can use Method D6053-96 for any electrical insulating varnishes.
3. Compliance with the usage limitations in section B.1 shall be demonstrated by the record keeping in section C.1.
4. Compliance with the temperature restriction in section B.2 and B.3 shall be demonstrated by the record keeping in section C.2.

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5. Compliance with the HAPs emissions limitations in section A.2.2.f. shall be demonstrated by the recordkeeping requirements in section C.3.
6. Compliance with the permanent total enclosure requirements specified in sections A.2.2.g., B.4. and B.5. shall be demonstrated by the recordkeeping requirements specified in section C.4.

F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.
2. The terms and conditions of this permit to install shall supersede the terms and conditions of permit to install number 14-1868 for emissions unit K007.
3. The following terms and conditions of this permit are federally enforceable: A., B., C., D., E. and F.2.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K008 - Armature Windings Coater controlled with a Catalytic Oxidizer -Modification	OAC rule 3745-31-05(A)(3)	0.75 lbs/hr coatings only 3.7 TPY VOC including cleanup
		See Section A.2.2.a, A.2.2.b. and A.2.2.g.
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-35-07(B) and 3745-21-09(B)(6).
	OAC rule 3745-35-07(B)	See Section A.2.2.f.
	OAC rule 3745-21-09(B)(6)	See Section A.2.2.c

2. Additional Terms and Conditions

- 2.a The VOC content as applied for the varnish employed in this emissions unit shall not exceed 2.6 pounds of VOC per gallon of varnish.
- 2.b The VOC content of the cleanup material employed in this emissions unit shall not exceed 7.32 pounds of VOC per gallon.
- 2.c When applying coatings, the permittee shall operate a catalytic oxidizer with an overall

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control efficiency which is at least 81% by weight and a destruction efficiency which is at least 90% by weight.

- 2.d The hourly emission limitation outlined above is based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with this limit.
- 2.e Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the VOC content limitations, usage limitations, the use of a catalytic oxidizer and compliance with the air toxics policy.
- 2.f The total allowable usage of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, from this facility shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on rolling, 12-month summations.
- 2.g The OC emissions from this emissions unit shall be controlled through the application of a permanent total enclosure with a 100% capture efficiency.

B. Operational Restrictions

1. The maximum annual coating and cleanup material usage for this emissions unit shall not exceed 10,757 gallons for coatings and 264 gallons for cleanup materials.
2. The average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The average temperature difference across the catalyst bed at maximum operating capacity, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.
4. 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

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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 inch of water, and 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 vented to the OC control devices.

By satisfying the above criteria for a permanent total enclosure, the OC 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.

5. The permanent total enclosure shall be maintained under negative pressure, at a minimum pressure differential that is not less than 0.007 inch of water, as a 3-hour average, whenever the emissions unit is in operation.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month for this emissions unit:
 1. The name and identification of each coating (varnish) and cleanup material employed;
 2. The VOC content of each coating and cleanup material, in pounds per gallon, as applied;
 3. The number of gallons of each coating and cleanup material employed; and,
 4. The total VOC emissions from all coatings and cleanup materials employed, in pounds or tons [b x c x (1- overall control efficiency)].
2. The permittee shall operate and maintain continuous temperature monitors and recorder(s) which

measure and record(s) the temperature immediately upstream and downstream of the incinerator's catalyst bed 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 monitors and recorder(s) 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 each day:

- a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases 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.
 - b. All 3-hour blocks of time (when the emissions unit was in operation at maximum operating capacity) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.
 - c. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation and the control device was required to be operated.
3. The permit to install for this emissions unit K008 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

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

Pollutant: Styrene

TLV (ug/m3): 85,202

Maximum Hourly Emission Rate (lbs/hr): 2.0 (Emissions units K001, K002 and K008)

Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m3): 71.1

MAGLC (ug/m3): 2029

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

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

If the permittee determines that the "Air Toxic Policy" will be satisfied with 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.

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

- c. when the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.
5. The permittee shall collect and record the following information each month for the entire facility:
- a. the name and identification number of each coating, employed;
 - b. the individual Hazardous Air Pollutant (HAP) content for each HAP of each coating in pounds of individual HAP per gallon of coating, as applied;
 - c. the total combined HAP content of each coating in pounds of combined HAPs per gallon of coating, as applied [sum all the individual HAP contents from (b)];
 - d. the number of gallons of each coating employed;
 - e. the name and identification of each cleanup material employed;
 - f. the individual HAP content for each HAP of each cleanup material, in pounds of individual HAP per gallon of cleanup material, as applied;
 - g. the total combined HAP content of each cleanup material, in pounds of combined HAPs per gallon of cleanup material, as applied [sum all the individual HAP contents from (f)];
 - h. the number of gallons of each cleanup material employed;
 - i. the total individual HAP usage for each HAP from all coatings and cleanup materials employed, in pounds or tons per month [for each HAP the sum of (b) times (d) for each coating plus the sum of (f) times (h) for each cleanup material];
 - j. the total combined HAP usage from all coatings and cleanup materials employed, in pounds or tons per month [the sum of (c) times (d) for each coating plus the sum of (g) times (h) for each cleanup material];
 - k. the updated rolling, 12-month summation of usage for each individual HAP emissions**, in tons. This shall include the information for the current month and the preceding eleven calendar months {for each HAP, the sum of [(b) times (d) plus the sum of (f) times (h)] x [1- overall control efficiency]}. For calculating styrene emissions from coatings containing styrene, use an emission factor of 0.52 lb styrene emitted/lb styrene input in the above calculation.

1. the updated rolling, 12-month summation of usage for total combined HAP emissions**, in tons [the summation of each individual HAP emission from (k) above]. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a individual emissions unit basis.

** Assume that styrene is emitted at 52% of the total amount of styrene used (Composite Fabricators Association, 1997) .

Assume that all HAP(s), other than styrene, are emitted at rates the same as the amount of HAP(s) used.

6. The permittee shall maintain and operate monitoring devices and a recorder that simultaneously measure and record the pressure inside and outside the permanent total enclosure. The monitoring and recording devices shall be 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 of 0.007 inch of water, as a 3-hour average.

D. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any monthly record showing the use of noncomplying coatings (inks or varnishes) or cleanup materials. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 30 days following the end of the calendar month.
2. The permittee shall submit deviation (excursion) reports that identify the following:
 - a. All 3-hour blocks of time when the emissions unit was in operation during which the average temperature of the exhaust gases immediately before the catalyst bed does not comply with the temperature limitations in section B.2; and
 - b. All 3-hour blocks of time when the emissions unit was in operation at maximum capacity during which or the average temperature difference across the catalyst bed does not comply with the temperature limitations in section B.3.

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3. The permittee shall submit annual reports which identify any exceedances of the annual coating and/or cleanup material usage limitation in section B.1., as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year.
4. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.
5. The permittee shall submit deviation (excursion) reports which identify any exceedance of the HAP emissions limitations set forth in term A.2.2.f. If no exceedances occurred during the reporting period then a report is required stating so.
6. The permittee shall submit quarterly pressure differential deviation (excursion) reports that identify all 3-hour blocks of time during which the permanent total enclosure was not maintained at the minimum pressure differential of 0.007 inch of water, as a 3-hour average.

E. Testing Requirements

- 1 The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 6 months after issuance of this permit.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency and destruction efficiency limitations for VOC.
 - c. The test method(s) which must be employed to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC are specified below. Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.

Method 25, 40 CFR Part 60, Appendix A
 - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Hamilton County Department of Environmental Services refusal to

accept the results of the emission test(s).

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

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

2. USEPA methods 24 and 24A shall be used to determine the VOC content for (a) coatings and (b) flexographic and rotogravure printing lines and related coatings, respectively. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 or 24A cannot be used for a particular coating or ink, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating or ink to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A. In lieu of Method 24, the permittee can use Method D6053-96 for any electrical insulating varnishes.
3. Compliance with the usage limitations in section B.1 shall be demonstrated by the record keeping in section C.1.
4. Compliance with the temperature restriction in section B.2 and B.3 shall be demonstrated by the record keeping in section C.2.
5. Compliance with the HAPs emissions limitations in section A.2.2.f. shall be demonstrated by the recordkeeping requirements in section C.4.
6. Compliance with the permanent total enclosure requirements specified in sections A.2.2.g., B.4. and B.5. shall be demonstrated by the recordkeeping requirements specified in section C.5.

F. Miscellaneous Requirements

1. The terms and conditions of this permit to install shall supersede the terms and conditions of permit to install number 14-4074 for emissions unit K008.

Mitsubishi Electric Automotive Inc
PTI Application: 14-04038
Issued

Facility ID: 1483090295

Emissions Unit ID: **K008**

2. The following terms and conditions of this permit are federally enforceable: A., B., C.1., C.2., C.4., C.5., D., E. and F.1.