



State of Ohio Environmental Protection Agency

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

**CERTIFIED MAIL**

Street Address:

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

Mailing Address:

Lazarus Gov.  
Center

**Application No: 14-04511**

**DATE: 4/3/2003**

Formica Corporation  
John Foged  
10155 Reading Road  
Cincinnati, OH 452414805

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

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

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

Very truly yours,

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

CC: USEPA

HCDES



**Permit To Install  
Terms and Conditions**

**Issue Date: 4/3/2003  
Effective Date: 4/3/2003**

FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 14-04511

Application Number: 14-04511  
APS Premise Number: 1431150801  
Permit Fee: **\$100**  
Name of Facility: Formica Corporation  
Person to Contact: John Foged  
Address: 10155 Reading Road  
Cincinnati, OH 452414805

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**10155 Reading Road  
Cincinnati, Ohio**

Description of proposed emissions unit(s):  
**Phenolic Resin Paper Coater W/Gas Fired Curing Oven and Controlled By Thermal Oxidizer.**

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

## Part I - GENERAL TERMS AND CONDITIONS

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

#### 1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
  - i. The date, place (as defined in the permit), and time of sampling or measurements.
  - ii. The date(s) analyses were performed.
  - iii. The company or entity that performed the analyses.
  - iv. The analytical techniques or methods used.
  - v. The results of such analyses.
  - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
  - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
  - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous

calendar quarters. See B.9 below if no deviations occurred during the quarter.

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

## **2. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

## **3. Risk Management Plans**

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

## **4. Title IV Provisions**

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

## **5. Severability Clause**

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

declared invalid.

## 6. General Requirements

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

## 7. Fees

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

## 8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are

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

## 9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
  - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
  - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

## 10. Permit To Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

## 11. Best Available Technology

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

## 12. Air Pollution Nuisance

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

## **B. State Only Enforceable Permit To Install General Terms and Conditions**

### **1. Compliance Requirements**

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

### **2. Reporting Requirements**

The permittee shall submit required reports in the following manner:

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

### **3. Permit Transfers**

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

### **4. Termination of Permit To Install**

This permit to install shall terminate within eighteen months of the effective date of the permit to install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete

within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

#### **5. Construction of New Sources(s)**

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

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

#### **6. Public Disclosure**

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

#### **7. Applicability**

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

**8. Construction Compliance Certification**

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

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

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

**C. Permit To Install Summary of Allowable Emissions**

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC	31.5
PM/PM10	0.99
SO2	0.044
CO	2.46
NOx	9.95

11

Formica Corporation

PTI Application: **14-04511**

**Modification Issued: 4/3/2003**

Facility ID: **1431150801**

**Part II - FACILITY SPECIFIC TERMS AND CONDITIONS**

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

None

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

None

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

**A. State and Federally Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
K014 - Phenolic Resin Paper Coater Line w/Gas-Fired Curing Oven and controlled by Thermal Oxidizer (Coater 109) -Modification	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-17-07(A)(1)
	OAC rule 3745-17-10
	OAC rule 3745-21-09(F)
	40 CFR Part 63 Subpart JJJJ

**Modification Issued: 4/3/2003**

Applicable Emissions Limitations/Control Measures	A.I.2.f.
<p>11.0 lbs VOC/hr for coating only; 0.225 lb Formaldehyde/hr; Incinerator emissions: 0.10 lb NO<sub>x</sub>/MMBTU; 0.0006 lb SO<sub>2</sub>/MMBTU; 0.021 lb CO/MMBTU; 0.0058 lb VOC/MMBTU; 0.012 lb PM/PM10/MMBTU. 0.75 TPY NO<sub>x</sub>; 0.004 TPY SO<sub>2</sub>; 0.16 TPY CO; 0.09 TPY PM/PM10. Curing oven emissions: 0.14 lb NO<sub>x</sub>/MMBTU; 0.0006 lb SO<sub>2</sub>/MMBTU; 0.035 lb CO/MMBTU; 0.0058 lb VOC/MMBTU; 0.0137 lb PM/PM10/MMBTU. 9.2 TPY NO<sub>x</sub>; 0.04 TPY SO<sub>2</sub>; 2.3 TPY CO; 0.9 TPY PM/PM10.</p>	<p>* based on a rolling, 12-month summation</p> <p>Visible particulate emissions shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.</p> <p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> <p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> <p>See term A.VI.1.</p>
<p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1) and OAC rule 3745-31-05(D).</p>	
<p>31.5 TPY VOC*</p>	
<p>See terms A.I.2.c. and</p>	

**Modification Issued: 4/3/2003****2. Additional Terms and Conditions**

- 2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by operation and maintenance of 95% efficient thermal oxidizer, emission limitations and compliance with the air toxics policy.
- 2.b** This emissions unit shall be equipped with a permanent total enclosure system with 100 percent capture, in accordance with Appendix M-Part 51-Method 204 and a thermal oxidizer with a minimum 95 percent VOC (Volatile Organic Compound) and Organic HAP (Hazardous Air Pollutants) destruction efficiency thus giving an overall control efficiency of 95 percent.
- 2.c** The emissions from emissions unit K014 shall not exceed 31.5 TPY VOC.
- 2.d** The VOC emissions from emissions unit K006 and K014 combined shall not exceed 98.9 TPY, based upon a rolling, 12-month summation of the monthly emissions. The facility has existing emission records for emissions unit K006 thus they will be able to calculate the rolling, 12-summation emissions upon startup of emissions unit K014.
- 2.e** The emissions of formaldehyde shall not exceed 0.225 pound per hour.
- 2.f** The following is a summary of the netting emissions in tons per year (TPY):

**Modification Issued: 4/3/2003**

<u>Emissions Unit</u>	<u>Pollutant</u>	<u>Baseline Existing*</u>	<u>Increase</u>	<u>Combined Increase</u>	<u>Decrease</u>
K006	VOC	-81.1			-13.7**
K014	VOC		+31.5		
K006 & K014	VOC			+98.9	
K007	VOC				-34.8*
Net Emission Change					-3.3

\* Based on the average actual emissions from the last two years of operation (1996, 1997)

\*\* Formica intends to remove treater 107 (K007). The following is a summary of the contemporaneous emission changes over the previous five years:

<u>Emissions Unit</u>	<u>Pollutant</u>	<u>Increase</u>	<u>Decrease</u>
K007	VOC		-34.8
K013 (Treater 99)@	VOC	+38.77	
K014 (Coater 109)	VOC	+31.5	
K006	VOC		-13.7**
5 Year Net Emission Change		+21.77	

@ From Permit to Install No. 14-4291

\*\* For purposes of explaining how the 98.9 TPY value was determined for the netting evaluation, K006 had actual emissions of 81.1 for the previous two years (1996, 1997). The -13.7 TPY value was determined by subtracting 81.1 from 67.4. The 67.4 TPY value plus 31.5 TPY value from K014 equals 98.9 TPY which is the permittee's combined allowable for these two emissions units.

**2.g** The hourly emission limitations outlined are based upon the emissions unit's Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with these limits.

## II. Operational Restrictions

1. Startup of the emissions unit K014 shall be concurrent with the complete and permanent shut

Emissions Unit ID: K014

down of treater 107 identified as Ohio EPA emission unit K007.

2. The average combustion temperature within the regenerative thermal oxidizer for any 3-hour block of time when the emissions unit is in operation shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated the emissions unit was in compliance.
3. 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 for any 3-hour block of time whenever the emissions unit is in operation.
4. This emissions unit shall be totally enclosed such that VOC emissions are captured and contained for discharge through the regenerative thermal oxidizer. Compliance with the following criteria, shall satisfy a portion of the requirements identified by U.S.EPA Method 204 for total enclosure:
  - a. any Natural Draft Opening (NDO) shall be at least 4 equivalent opening diameters from each VOC emission point unless otherwise specified by the Administrator;
  - b. the total of all NDO's shall not exceed 5 percent of the surface area of the enclosure's four walls, floor and ceiling;
  - c. the average facial velocity of air through all NDO's shall be at least 3,600 m/hr (200 FPM) which corresponds to a pressure differential of 0.007 inches of water. The direction of air flow through all NDO's 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 of the process; and,
  - e. all VOC emissions must be captured and contained for discharge through the VOC control device.

### **III. Monitoring and/or Record keeping Requirements**

1. The permittee shall collect and record the following information each month for each coating and cleanup material employed in emissions unit K006 and K014:
  - a. the name and identification number of each coating and cleanup material employed;
  - b. the VOC content of each coating and cleanup material (excluding water and exempt solvents), as applied;
  - c. the number of gallons of each coating and cleanup material employed;
  - d. the amount of natural gas combusted;

**Modification Issued: 4/3/2003**

- e. the total VOC emissions from all coatings and cleanup material employed and natural gas combusted, in pounds or tons for each emissions unit;
- f. the updated rolling, 12-month summation of total VOC emissions for emissions units K014;  
and

**Modification Issued: 4/3/2003**

- g. the updated rolling, 12-month summation of total VOC emissions for emissions units K006 and K014, combined.
- h. the production rate in tons per month

In conjunction with the above, the permittee shall calculate the monthly VOC emissions in the following manner:

$$E = \{ [ (G \times H) (1 - CE) ] + (C \times V) \} + N$$

E = the monthly VOC emission rate, pounds/month

G = the amount of coating used, pounds/month

H = VOC emission factor, pounds VOC/pounds resin

C = the amount of cleanup material used, gallons/month

CE = the control efficiency of the thermal oxidizer

V = the VOC content, pounds VOC/gallon

N = the emissions from natural gas combustion, pounds/month

$$FE = J \times F$$

FE = Formaldehyde emission rate, pounds/month

F = emission factor in pounds of formaldehyde per ton based on the most recent emissions test

J = production rate in tons per month

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

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

- a. a log of downtime for the capture (collection) system, control device and monitoring equipment, when the associated emissions unit was in operation; and,
- b. all 3-hour blocks of time during which the average combustion temperature within the regenerative thermal oxidizer, when the emissions unit was in operation, was more than 50

Emissions Unit ID: K014

degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance.

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

The permittee shall record and maintain the following information of a daily basis:

- a. all 3-hour blocks of time during which the permanent total enclosure was not maintained at the minimum differential pressure of 0.007 inches of water.
- b. a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

#### **IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month emission limitation for VOC emissions from emissions units K014 and emissions unit K006 and K014, combined.
2. The permittee shall submit annual reports which specify the total VOC emissions from emissions units K006 and K014. These reports shall also include the updated rolling, 12-month summation of VOC emissions for each calendar month in the reporting period. These reports shall be submitted by January 31 of each year.
3. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the regenerative thermal oxidizer does not comply with the temperature limitation specified in A.II.2.
4. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the minimum differential pressure of 0.007 inches of water does not comply with the limitation specified in A.II.3.
5. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

#### **V. Testing Requirements**

1. The permittee shall calculate the VOC emissions rate by multiplying the VOC content or emissions factor from stack testing by the coating and/or cleanup material usage rate (see Additional Special Term and Condition A.III.1).
2. Compliance with the visible particulate emissions limitation shall be demonstrated by the methods outlined in 40 CFR Part 60, Appendix A, Method 9.

**Modification Issued: 4/3/2003**

3. Compliance with the formaldehyde emissions limitation outlined in A.I 2.e. shall be determined based upon the record keeping in Additional Special Term and Condition A.III.1.
4. If testing is required the following methods shall be employed:
  - i. Method 25 shall be used to demonstrate compliance with the allowable mass emission rate(s). The test method(s) which must be employed to demonstrate compliance with the overall control efficiency are specified below.
  - ii. Method 18 protocol shall be utilized to determine the mass emission rate of the primary components in the VOC stream (phenol, formaldehyde and methanol).
  - iii. 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 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 or the approved alternative test protocol ( e.g., the mass balance protocol approved on October 25, 1995).

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.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

5. Compliance with the operational restriction in term A.II.2 shall be determined by the record keeping in term A.III.2.
6. Compliance with the operational restriction in term A.II.3 shall be determined by the record keeping in term A.III.3.

**VI. Miscellaneous Requirements**

Formica Corporation  
PTI Application: 14-04511  
**Modif**

Facility ID: 1431150801

Emissions Unit ID: K014

1. The permittee shall comply with the requirements outlined in 40 CFR Part 63 Subpart JJJJ by December 5, 2005.

**Modification Issued: 4/3/2003**

**B. State Only Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K014 - Phenolic Resin Paper Coater Line w/Gas-Fired Curing Oven and controlled by Thermal Oxidizer (Coater 109) -Modification		

**2. Additional Terms and Conditions**

**2.a** None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record keeping Requirements**

1. The permit to install for this emissions unit K014 was evaluated based on the actual 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. The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

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

Pollutant: Phenol

24

Formic

PTI A<sub>1</sub>

Emissions Unit ID: K014

**Modification Issued: 4/3/2003**

TLV (ug/m<sup>3</sup>): 19,245

Maximum Hourly Emission Rate (lbs/hr): 134.0 (Emissions Units K006 and K014)

Predicted 1-Hour Maximum Ground-Level

Concentration (ug/m<sup>3</sup>): 450

MAGLC (ug/m<sup>3</sup>): 458

**Modification Issued: 4/3/2003**

Pollutant: Methanol

TLV (ug/m<sup>3</sup>): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1844 (Emissions Units K006 and K014)

Predicted 1-Hour Maximum Ground-Level

Concentration (ug/m<sup>3</sup>): 6188

MAGLC (ug/m<sup>3</sup>): 6238

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.).

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,

Emissions Unit ID: K014

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.

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None