



State of Ohio Environmental Protection Agency

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

CERTIFIED MAIL

Street Address:

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

Mailing Address:

Lazarus Gov.
Center

Application No: 01-06712

DATE: 6/19/2001

PPG Industries Inc
Lori Leffler
PO Box 457
Circleville, OH 43113

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
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA

CDO



Permit To Install

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

FINAL PERMIT TO INSTALL 01-06712

Application Number: 01-06712
APS Premise Number: 0165000007
Permit Fee: **\$800**
Name of Facility: PPG Industries Inc
Person to Contact: Lori Leffler
Address: PO Box 457
Circleville, OH 43113

Location of proposed air contaminant source(s) [emissions unit(s)]:

559 Pittsburgh Rd
Circleville, Ohio

Description of proposed emissions unit(s):

K-9 Resin Batch Reactor System; K-10 Resin Batch Reactor System.

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

1. Monitoring and Related Recordkeeping and Reporting Requirements

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

calendar quarters. See B.10 below if no deviations occurred during the quarter.

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

2. Scheduled Maintenance/Malfunction Reporting

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

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

3. Risk Management Plans

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

4. Title IV Provisions

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

5. Severability Clause

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

6. General Requirements

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

7. Fees

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

8. Federal and State Enforceability

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

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

9. Compliance Requirements

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

10. Permit To Operate Application

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

11. Best Available Technology

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

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

1. Compliance Requirements

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

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

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

3. Permit Transfers

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

4. 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.

5. 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.

6. 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.

7. 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.

8. 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).

9. 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.

10. 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>
OC	2.20
PM	0.20

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PPG Industries Inc

PTI Application: **01-06712**

Issued: 6/19/2001

Facility ID: **0165000007**

12

PPG Ii

PTI A₁

Issued: 6/19/2001

Emissions Unit ID: **P019**

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>	
		OAC rule 3745-21-07(G)(2)
K-9 Resin Batch Reactor System with thermal oxidizer for control of organic compound (OC) emissions and dust collector for control of particulate matter ("PM") emissions	OAC rule 3745-31-05(A)(3)	
		OAC rule 3745-21-07(G)(6)
		OAC rule 3745-17-11

OAC rule 3745-17-07(A)

Applicable Emissions
Limitations/Control Measures

OC emissions shall not exceed 0.25 lb/hr and 1.10 ton per year

Particulate emissions (PE) shall not exceed 0.02 lbs/hr and 0.10 tons/yr

The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(G)(2), 3745-21-07(G)(6) and OAC rule 3745-17-07(A).

Organic compound (OC) emissions shall be reduced by at least eighty-five percent (85%), by weight, as an overall control efficiency.

Ninety percent or more of the carbon in the organic material being incinerated shall be oxidized to carbon dioxide.

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

Visible particulate emissions from the dust collector shall not exceed 20% opacity as a six minute average, except as provided by rule.

2. Additional Terms and Conditions

- 2.a** The permittee shall operate the thermal oxidizer during any operation of this emissions unit.
- 2.b** The permittee shall operate the dust collector during any addition of dry raw materials to the batch.
- 2.c** OAC rule 3745-21-07(G)(2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

II. Operational Restrictions

1. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
2. The pressure drop across the primary dust collector shall be maintained within the range of 1.0 to 8.0 inches of water. The pressure drop across the secondary dust collector shall be maintained within the range of 0.5 to 2.0 inches.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. 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.
2. The permittee shall collect and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. If required, the permittee shall perform weekly checks, when the emissions unit is in operation and dry raw materials are being added to the batch, for any visible particulate emissions from the dust collector serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;

- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.
4. Once a week, the permittee shall record the pressure drop of the primary dust collector. Once a month the permittee shall record the pressure drop of the secondary dust collector located on the roof.

IV. Reporting Requirements

1. The permittee shall submit semi-annual deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. These reports shall be submitted by January 31 and July 31 of each year and shall cover the previous six month period.
2. The permittee shall submit semi-annual summaries which include a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation. These summaries shall be submitted by January 31 and July 31 of each year and shall cover the previous six month period.
3. If required, the permittee shall submit semiannual written reports which (a) identify all weeks during which any visible particulate emissions were observed from the dust collector serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Ohio EPA, Central District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.
4. The permittee shall submit semi annual pressure drop deviation (excursion) reports that identify all periods of time which the pressure drop across the dust collectors did not comply with the allowable range specified above. These reports shall be submitted to the Ohio EPA, Central District Office by January 31 and July 31 of each year and shall cover the previous six month period.

V. 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 the date of issuance of the final Title V permit for this facility.
- b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for OC and the destruction efficiency requirement for the thermal incinerator.
- c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal incinerator: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. The test method 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.
- d. The capture efficiency of the vapor collection system is assumed to be 100% because the reactor system is a closed system and all the vents in the process enter a vapor header routed to the thermal oxidizer. Because this efficiency is based upon emissions testing utilizing USEPA Method 25, the mass emissions of OC as carbon are employed in the efficiency determination and the control efficiency is equivalent to the destruction efficiency.
- e. Testing shall be conducted while the emission unit is operating at or near its maximum capacity for a typical resin batch for the reactor system. During testing other emission sources that vent to the thermal oxidizer shall be operated, or not operated, according to standard PPG operating practices.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or

local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

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

2. Emission Limitations-

Organic compound (OC) emissions shall not exceed 0.25 lbs/hr and 1.10 tons/yr.

Applicable Compliance Method-

Compliance is based on the control efficiency of the thermal oxidizer at the PPG-Circleville Coatings & Resins (C&R) Plant and the calculated uncontrolled OC emission rate for a typical resin batch for the reactor system.

USEPA Method 25 emission testing was conducted June 7, 1991 on the thermal oxidizer. The tested destruction efficiency was 92.8%. In accordance with OAC rule 3745-21-10(C)(3)(h), the control efficiency of the vapor control system is the percent reduction in mass emissions of OC between the inlet and the outlet of the vapor control system. The capture efficiency of the vapor collection system is assumed to be 100% because the reactor system is a closed system and all the vents in the process enter a vapor header routed to the thermal oxidizer. Because this efficiency is based upon emissions testing utilizing USEPA Method 25, the mass emissions of OC as carbon are employed in the efficiency determination and the control efficiency is equivalent to the destruction efficiency.

The uncontrolled OC emission rate for a typical resin batch for the reactor system was calculated by PPG in the March 10, 1989 Permit to Operate application. The displacement losses (OC emissions) from the addition of materials during the batch process, dropping of the finished resin, and sparging of the reactor vessel were calculated using the Ideal Gas Law. The total uncontrolled OC emission rate was calculated as 56.7 lbs OC/batch.

The average hourly uncontrolled emission rate is calculated as:
 $56.7 \text{ lbs OC/batch} \times \text{batch}/23 \text{ hr} = 2.46 \text{ lbs OC/hr}$

The average hourly controlled emission rate is calculated as:
 $2.46 \text{ lbs OC/hr} \times (1-0.90^*) = 0.25 \text{ lb OC/hr}$

*overall control efficiency

Annual OC emissions are calculated as:
 $0.25 \text{ lb OC/hr} \times 8760 \text{ hrs/yr} \times 1 \text{ ton}/2000 \text{ lbs} = 1.10 \text{ tons OC/yr}$

3. Emission Limitations-

Particulate (PE) emissions shall not exceed 0.02 lb/hr and 0.10 tons/yr.

Applicable Compliance Method-

Compliance is based on the PPG 1996 Fee Emission Report emission factor of 0.00025 lb PM/lb raw materials, the maximum process weight rate, and the operating control efficiency for the dust collector as follows:

$$(0.00025 \text{ lb PM/lb raw materials}) \times (4500 \text{ lbs/hr})^* = 1.125 \text{ lbs PM/hr} \times (1-0.98)** = 0.02 \text{ lb PM/hr}$$

$$0.02 \text{ lb PM/hr} \times 8760 \text{ hrs/yr} \times 1 \text{ ton/2000 lbs} = 0.10 \text{ ton PM/yr}$$

*maximum process weight rate

**operating control efficiency for the dust collector

If required, emission testing shall be conducted in accordance with 40 CFR Part 60, Appendix A, Methods 1-5 and the procedures specified in OAC rule 3745-17-03.

4. Emission Limitations-

Visible particulate emissions from the dust collector shall not exceed 20% opacity as a six minute average, except as provided by rule.

Applicable Compliance Method-

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

VI. Miscellaneous Requirements

None.

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

Issued: 6/19/2001

Applicable Emissions
Limitations/Control
Measures

OC emissions shall not exceed 0.25 lbs/hr and 1.10 tons/yr.

Particulate emissions (PE) shall not exceed 0.02 lbs/hr and 0.10 tons/yr

The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(G)(2), OAC rule 3745-21-07(G)(6) and OAC rule 3745-17-07(A).

Organic compound (OC) emissions shall be reduced by at least eighty-five percent (85%), by weight, as an overall control efficiency.

Ninety percent or more of the carbon in the organic

material being incinerated shall be oxidized to carbon dioxide.

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

Visible particulate emissions from the dust collector shall not exceed 20% opacity as a six minute average, except as provided by rule.

Emissions Unit ID: P020

2. Additional Terms and Conditions

- 2.a** The permittee shall operate the thermal oxidizer during any operation of this emissions unit.
- 2.b** The permittee shall operate the dust collector during any addition of dry raw materials to the batch.
- 2.c** OAC rule 3745-21-07(G)(2) limits organic compound (OC) emissions to 8 pounds per hour and 40 pounds per day or requires an 85% reduction in OC emissions. The thermal oxidizer is employed to comply with the requirement to achieve an 85% reduction in OC emissions instead of complying with the OC emission limits of 8 pounds per hour and 40 pounds per day.

II. Operational Restrictions

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

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III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the combustion temperature. 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.
2. The permittee shall collect and record the following information for each day:
 - a. All 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
 - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. IF required, the permittee shall perform weekly checks, when the emissions unit is in operation and dry raw materials are being added to the batch, for any visible particulate emissions from the dust collector serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

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IV. Reporting Requirements

1. The permittee shall submit semi-annual deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance. These reports shall be submitted by January 31 and July 31 of each year and shall cover the previous six month period.
2. The permittee shall submit quarterly summaries which include a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation. These summaries shall be submitted by January 31 and July 31 of each year and shall cover the previous six month period.
3. If required, the permittee shall submit semiannual written reports which (a) identify all weeks during which any visible particulate emissions were observed from the dust collector serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Ohio EPA, Central District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. 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 the date of issuance of the final Title V permit for this facility.
 - b. The emission testing shall be conducted to demonstrate compliance with the overall control efficiency limitation for OC and the destruction efficiency requirement for the thermal incinerator.
 - c. The following test method(s) shall be employed to demonstrate compliance with the destruction efficiency requirement for the thermal incinerator: Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

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The test method 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.

- d. The capture efficiency of the vapor collection system is assumed to be 100% because the reactor system is a closed system and all the vents in the process enter a vapor header routed to the thermal oxidizer. Because this efficiency is based upon emissions testing utilizing USEPA Method 25, the mass emissions of OC as carbon are employed in the efficiency determination and the control efficiency is equivalent to the destruction efficiency.
- e. Testing shall be conducted while the emission unit is operating at or near its maximum capacity for a typical resin batch for the reactor system. During testing other emission sources that vent to the thermal oxidizer shall be operated, or not operated, according to standard PPG operating practices.

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

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and

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information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

2. Emission Limitations-

Organic compound (OC) emissions shall not exceed 0.25 lbs/hr and 1.10 tons/yr

Applicable Compliance Method-

Compliance is based on the control efficiency of the thermal oxidizer at the PPG-Circleville Coatings & Resins (C&R) Plant and the calculated uncontrolled OC emission rate for a typical resin batch for the reactor system.

USEPA Method 25 emission testing was conducted June 7, 1991 on the thermal oxidizer. The tested destruction efficiency was 92.8%. In accordance with OAC rule 3745-21-10(C)(3)(h), the control efficiency of the vapor control system is the percent reduction in mass emissions of OC between the inlet and the outlet of the vapor control system. The capture efficiency of the vapor collection system is assumed to be 100% because the reactor system is a closed system and all the vents in the process enter a vapor header routed to the thermal oxidizer. Because this efficiency is based upon emissions testing utilizing USEPA Method 25, the mass emissions of OC as carbon are employed in the efficiency determination and the control efficiency is equivalent to the destruction efficiency.

The uncontrolled OC emission rate for a typical resin batch for the reactor system was calculated by PPG in the March 10, 1989 Permit to Operate application. The displacement losses (OC

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emissions) from the addition of materials during the batch process, dropping of the finished resin, and sparging of the reactor vessel were calculated using the Ideal Gas Law. The total uncontrolled OC emission rate was calculated as 56.7 lbs OC/batch.

The average hourly uncontrolled emission rate is calculated as:
 $56.7 \text{ lbs OC/batch} \times \text{batch}/23 \text{ hr} = 2.46 \text{ lbs OC/hr}$

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The average hourly controlled emission rate is calculated as:
 $2.46 \text{ lbs OC/hr} \times (1-0.90^*) = 0.25 \text{ lb OC/hr}$

*overall control efficiency

Annual OC emissions are calculated as:
 $0.25 \text{ lb OC/hr} \times 8760 \text{ hrs/yr} \times 1 \text{ ton}/2000 \text{ lbs} = 1.10 \text{ tons OC/yr}$

3. Emission Limitations-

Particulate (PE) emissions shall not exceed 0.02 lbs/hr and 0.10 tons/yr.

Applicable Compliance Method-

Compliance is based on the PPG 1996 Fee Emission Report emission factor of 0.00025 lb PM/lb raw materials, the maximum process weight rate, and the operating control efficiency for the dust collector as follows:

$(0.00025 \text{ lb PM/lb raw materials}) \times (4500 \text{ lbs/hr})^* = 1.125 \text{ lbs PM/hr} \times (1-0.98)^{**} = 0.02 \text{ lb PM/hr}$

$0.02 \text{ lb PM/hr} \times 8760 \text{ hrs/yr} \times 1 \text{ ton}/2000 \text{ lbs} = 0.10 \text{ ton PM/yr}$

*maximum process weight rate

**operating control efficiency for the dust collector

If required, emission testing shall be conducted in accordance with 40 CFR Part 60, Appendix A, Methods 1-5 and the procedures specified in OAC rule 3745-17-03.

4. Emission Limitations-

Visible particulate emissions from the dust collector shall not exceed 20% opacity as a six minute average, except as provided by rule.

Applicable Compliance Method-

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

VI. Miscellaneous Requirements

None

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
K-10 Resin Batch Reactor System with thermal oxidizer for control of organic compound (OC) emissions and dust collector for control of particulate matter ("PM") emissions	None	None

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

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None.

VI. Miscellaneous Requirements

None.

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Please describe any hard copy information is being submitted with this recommendation (Please send hard copy information to Pam McGraner, DAPC Central Office - Air Quality Modeling and Planning):

NONE

Please provide any additional permit specific notes as you deem necessary:

CDO New Source Review Discussion for:

**Permit to Install 01-06712
Facility ID = 0165000007
PPG Industries Ohio, Inc.
559 Pittsburgh Drive
Circleville, OH 43113**

A. GENERAL INFORMATION

Background Information

PPG makes resin in the Coatings and Resin (C&R) plant at the Circleville, OH facility. Reactors K-9 (P019) and K-10 (P020) were installed in 1976 and 1975, respectively. During the course of reviewing the Title V application, there was no record of PTIs being issued for these reactors. On June 26, 1996, in order to resolve an enforcement case, PPG submitted PTI applications for these reactors so that a thermal oxidizer could be added to the permits. However, the addition of the thermal oxidizer (or any control equipment per se) does not require a PTI. This PTI (for P019 and P020) needs to be issued before the Title V permit can be issued.

Emissions Unit Description

Each vent in the reactor system is connected to a vapor header routed to the thermal oxidizer and each reactor is vented to a dust collector for the control of particulate matter ("PM") during the addition of dry raw materials to the batch.

B. APPLICABLE RULES

BAT for OC

OAC rule 3745-21-07(G)(2) is applicable since the solvents used are photochemically reactive. OAC rule 3745-21-07(G)(6) is applicable since a thermal oxidizer is used to control OC emissions. As indicated in the permit, the thermal oxidizer is employed to comply with the destruction efficiency requirement and the OC emission limits specified in the PTI pursuant to the Best Available Technology (BAT) requirements of OAC rule

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3745-31-05(A)(3). The OC emission limits in the PTI are more stringent than the OC emission limits specified in OAC rule 3745-21-07(G)(2).

As indicated above, the thermal oxidizer was installed in 1989 as a result of F&O's from an enforcement case. The calculated uncontrolled hourly OC emission rate is 2.46 lbs OC/hr and the calculated uncontrolled daily OC emission rate is 59.04 lbs OC/day. Therefore, controls would still be necessary for PPG to comply with the 40 pounds OC per day limit under OAC rule 3745-21-07(G)(2). Therefore, the use of the thermal oxidizer is specified as BAT since it would have been necessary to employ controls in order to comply with the 40 pounds OC per day limit when P019 and P020 were installed in 1976 and 1975, respectively.

BAT for PM

OAC rules 3745-17-11 and 3745-17-07 are applicable since PM is generated during the addition of dry raw materials to the batch. The PM emission limits established pursuant to OAC rule 3745-31-05(A)(3) are based on the PPG 1996 Fee Emission Report emission factor for PM. The lb PM/hr limits established in the PTI are well below the PM limits of 7.06 lbs PM/hr and 4.10 lbs PM/hr from Table I of OAC rule 3745-17-11 for P019 and P020 respectively.

C. CALCULATIONS

Calculations are detailed in the STCs.

Air Toxics Modeling

Air Toxics Modeling was not performed because the toxics policy did not exist at the time P019 and P020 were installed (1976 and 1975, respectively).

D. PTI FEE EXPLANATION

The process weight rate for P019 is 4500 lbs/hr, and the fee is \$390 based on the old fee schedule. The process weight rate for P020 is 2000 lbs/hr, and the fee is \$390 based on the old fee schedule. The fees are doubled for construction without a PTI. Therefore, the total fee is: $\$390 \times 2 = \$780 \times 2 = \$1560$.

2/7/00

Andrew Hall

Permit To Install Synthetic Minor Write-Up

NONE

Please fill in the following for this permit:

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
OC	2.20
PM	0.20

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Emissions Unit ID: **P020**

