

TERMINATION OF PERMIT TO INSTALL

Substantial construction for installation must take place within 18 months of the effective date of this permit. 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.

NOTICE OF INSPECTION

The Director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above-named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, or to examine records or reports pertaining to the construction, modification or installation of the source(s) of environmental pollutants identified within this permit.

CONSTRUCTION OF NEW SOURCES

The proposed source(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 are inadequate or cannot meet applicable standards.

If the construction of the proposed source(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 Ohio Administrative Code (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

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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 applicable standards.

PERMIT TO INSTALL FEE

In accordance with Ohio Revised Code 3745.11, the specified Permit to Install fee must be remitted within 30 days of the effective date of this permit to install.

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.

APPLICABILITY

This Permit to Install is applicable only to the contaminant sources identified. Separate application must be made to the Director for the installation or modification of any other contaminant sources.

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.

PERMIT TO OPERATE APPLICATION

A Permit to Operate application must be submitted to the appropriate field office for each air contaminant source in this Permit to Install. In accordance with OAC Rule 3745-35-02, the application shall be filed no later than thirty days after commencement of operation.

SOURCE OPERATION AFTER COMPLETION OF CONSTRUCTION

This facility is permitted to operate each source described by this permit to install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws and regulations.

AIR EMISSION SUMMARY

The air contaminant sources listed below comprise the Permit to Install for PROTEC COATING COMPANY located in Putnam County. The sources listed below shall not exceed the emission limits/control requirements contained in the table. This condition in no way limits the applicability of any other state or federal regulations. Additionally, this condition does not limit the applicability of additional special terms and conditions of this permit.

<u>Ohio EPA Source Number</u>	<u>Source Identification Description</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
B043	20.9 MMBTU/hr natural gas-fired hot water boiler (CGL #2)	20.9 MMBTU/hour natural gas-fired hot water boiler (CGL #2)	Use of Low-NO _x burner at 0.033 pound NO _x /MMBtu forced draft burners with flue gas re-circulation); compliance with permit allowables, and with 3745-31-053745-17-10 (B)(1) 3745-17-07 (A)	3745-23-06 (B) 3745-21-02 3745-21-08 40 CFR Subpart "Dc" (NSPS) 3745-31-11 through 3745-31-20 40 CFR 51.166 3745-31-05 3745-17-10 (B)(1) 3745-17-07 (A) 3745-23-06 (B) 3745-21-02 3745-21-08 40 CFR Subpart "Dc"
B044		Use of Low-NO _x burner at 0.033 pound NO _x /MMBtu forced draft burners with flue gas re-circulation) compliance with		

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(NSP 0.033 pound
 S) NO_x/MMBTU
 3745- 0.69 pound
 31-11 NO_x/hour
 3.02 TPY - NO_x
 0.23 pound
 CO/hour
 0.11 pound
 VOC/hour
 0.02 pound PM-
 PM₁₀/hour
 Opacity
 restrictions
 (See Additional
 Special Terms
 and Conditions)

0.033 pound
 NO_x/MMBTU
 0.69 pound
 NO_x/hour
 3.02 TPY NO_x
 0.23 pound
 CO/hour
 0.11 pound
 VOC/hour
 0.02 pound PM-
 PM₁₀/hour
 Opacity
 restrictions
 (See Additional

**Ohio
 EPA
 Source
 Number**

**Source
 Identification
 Description**

**BAT
 Determination**

**Applicable
 Federal &
 OAC Rules**

**Permit Allowable
 Mass Emissions
 and/or
 Control/Usage
 Requirements**

B044

Cont'd

P010

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	permit terms and conditions	through 3745-31-20 40 CFR 51.166	Special Terms and Conditions
76.8 MMBTU/hr natural gas fired continuous annealing furnace with five 1.0 MMBTU/hr auxiliary natural gas burners*	Use of Bloom 2320 recuperative radiant tube burners with staged air nozzles, and NO _x OUT SCR systems; Compliance with permit allowables, and with permit terms and conditions	3745-31-05 3745-17-07 (A) 3745-17-11 3745-23-06 (B) 3745-21-02 3745-21-08 3745-31-11 through 3745-31-20 40 CFR 51.166	0.10 pound NO _x /MMBTU 7.68 pounds NO _x /hour 33.68 TPY NO _x 1.27 pounds CO/hour 5.60 TPY CO 0.21 pound VOC/hour 0.9 ton/yr PM ₁₀ 1.03 pounds PM ₁₀ /hour 4.5 tons/yr PM ₁₀ Opacity restrictions (See Additional Special Terms and Conditions) Ammonia 3.99 TPY

Note: All PM is assumed to be PM₁₀.

* Auxiliary burners only operate when the annealing furnace is operating at part load (approximately 25 MMBTU/hr).

This supplemental heat is designed to maintain a catalyst system inlet temperature such that NO_x control remains high.

SUMMARY

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons/Year</u>
NO _x	39.72
CO	7.6
PM/PM ₁₀	4.7
VOC	1.88
Ammonia	3.99

NSPS REQUIREMENTS

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

<u>Source No.</u>	<u>Source Description</u>	<u>NSPS Regulation (Subpart)</u>
B043 B044	20.9 MMBTU/hour natural gas fired hot water boilers	"Dc"

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

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

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

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P.O. Box 163669
Columbus, OH 43216-3669

and OEPA Northwest District Office - DAPC
347 North Dunbridge Road
Bowling Green, Ohio 43402

PERFORMANCE TEST REQUIREMENTS

The permittee shall conduct, or have conducted, performance testing on the air contaminant source(s) in accordance with procedures approved by the Agency. Two copies of the written report describing the test procedures followed and the results of such tests shall be submitted and signed by the person responsible for the test. The Director, or an Ohio EPA representative, shall be allowed to witness the test, examine

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testing equipment, and require the acquisition or submission of data and information necessary to assure that the source operation and testing procedures provide a valid characterization of the emissions from the source and/or the performance of the control equipment.

- A. A completed Intent to Test form shall be submitted to the appropriate Ohio EPA District Office or Local Air Pollution Control Agency where the original permit application was filed. This notice shall be made 30 days in advance and shall specify the source operating parameters, the proposed test procedures, and the time, date, place and person(s) conducting such tests.
- B. Two copies of the test results shall be submitted within 30 days after the completion of the performance test.
- C. Tests shall be performed for the following source(s) and pollutant(s):

Source

P010
B043 or B044

Pollutants

NO_x and CO
NO_x and CO

PSD REQUIREMENTS

The source described in this Permit to Install is subject to the applicable provisions of the Prevention of Significant Deterioration (PSD) regulations as promulgated by the United States Environmental Protection Agency 40 CFR 52.21. The authority to apply and enforce the PSD regulations has been delegated to the Ohio Environmental Protection Agency. The terms and conditions of this permit and the requirements of the PSD regulations are also enforceable by the United States Environmental Protection Agency.

In accordance with 40 CFR 124.15, 124.19 and 124.20, the following shall apply: (1) the effective date of this permit shall be 30 days after the service of notice to any public commentors of the final decision to issue, modify, or revoke and re-issue the permit, unless the service of notice is by mail, in which case the effective date of the permit shall be 33 days after the service of notice; and (2) if an appeal is made to the Administrator of the United States Environmental Protection Agency, the effective date of the permit is suspended until such time as the appeal is resolved or denied.

RECORD(S) RETENTION AND AVAILABILITY

All records required by this Permit to Install shall be retained on file for a period of not less than three years unless otherwise indicated by Ohio Environmental Protection Agency. All records shall be made available to the Director, or any representative of

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the Director, for review during normal business hours.

REPORTING REQUIREMENTS

Unless otherwise specified, reports required by the Permit to Install need only be submitted to OEPA Northwest District Office - DAPC, 347 North Dunbridge Road, Bowling Green, Ohio 43402.

WASTE DISPOSAL

The owner/operator shall comply with any applicable state and federal requirements governing the storage, treatment, transport and disposal of any waste material generated by the operation of the sources.

MAINTENANCE OF EQUIPMENT

This source and its associated air pollution control system(s) shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers in order to minimize air contaminant emissions.

MALFUNCTION/ABATEMENT

In accordance with OAC RULE 3745-15-06, any malfunction of the source(s) or associated air pollution control system(s) shall be reported immediately to the OEPA Northwest District Office - DAPC, 347 North Dunbridge Road, Bowling Green, Ohio 43402.

Except as provided by OAC Rule 3745-15-06(A)(3), scheduled maintenance of air pollution control equipment that requires the shutdown or bypassing of air pollution control system(s) must be accompanied by the shutdown of the associated air pollution sources.

AIR POLLUTION NUISANCES PROHIBITED

The air contaminant source(s) identified in this permit may not cause a public nuisance in violation of OAC Rule 3745-15-07.

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.

ADDITIONAL SPECIAL TERMS AND CONDITIONS

INTRODUCTION

This permit-to-install (PTI) is for the Continuous Galvanizing Line (CGL) #2 at Protec Coating Company (herein referred to as "permittee"), located in Leipsic, Ohio. The emissions units of the CGL #2, which are covered by this permit, consist of a 76.8 MMBTU/hr annealing furnace, and two (2) 20.9 MMBTU/hr Hot Water Boilers. Other activities which are de minimis, and therefore, exempt from air permitting include, three (3) strip dryers, thirteen (13) air make-up units, and eight (8) space heaters. CGL #2's potential-to-emit, including de minimis sources, is 45.78 Tons per year (TPY) of NO_x.

A. APPLICABLE EMISSION LIMITATIONS AND/OR CONTROL REQUIREMENTS

1. The applicable emission limitations and/or control requirements for emissions unit P010 are as follows:
 - a. the permittee shall burn only natural gas and the maximum heat input (including the lance pilot) shall not exceed 76.8 million British Thermal Units per hour (MMBTU/hour);
 - b. the permittee shall employ the Bloom Model 2320-063 recuperative radiant tube furnace burners with all "air-staged nozzles" and two NO_x OUT SCR systems for NO_x reduction. The air-staged nozzle design along with the two NO_x OUT SCR systems shall limit NO_x emissions to 0.10 pound-NO_x/MMBTU heat input (including lance pilot);
 - c. Nitrogen Oxide (NO_x) emissions shall not exceed 0.10 pound (lbs) per MMBTU of heat input (including lance pilot), 7.68 pounds per hour, and 33.68 tons per year (TPY). Volatile Organic Compound (VOC) shall not exceed 0.21 pound/hour and 0.90 TPY. Carbon monoxide (CO) emissions shall not exceed 1.27 pounds/hour and

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5.60 TPY. Particulate matter (PM-PM₁₀) emissions shall not exceed 1.03 pounds/hour and 4.50 TPY;

- d. visible particulate emissions shall not exceed 20 percent (20%) opacity, as a six-minute average, while the emissions unit is in operation;
 - e. the ammonia/gas ratio associated with the selective catalyst reduction control device shall be continuously maintained at a value of not less than established during the most recent emission test that demonstrated that the emissions unit was in compliance; and,
 - f. the inlet duct temperature within the selective catalyst reduction control device, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 700 degrees Fahrenheit.
2. The applicable emission limitations and/or control requirements for emissions unit B043 are as follows:
- a. the permittee shall burn only natural gas and the maximum heat input shall not exceed 20.9 MMBTU/hour;
 - b. the permittee shall employ low-NO_x burners to limit NO_x emissions to 0.033 pound-NO_x/MMBTU of heat input;
 - c. NO_x emissions shall not exceed 0.033 pound/MMBTU of heat input, 0.69 pound/hour, and 3.02 TPY. VOC emissions shall not exceed 0.11 pound/hour and 0.48 TPY. CO emissions shall not exceed 0.23 pound/hour and 1.00 TPY. Particulate matter (PM) emissions shall not exceed 0.02 pound/hour and 0.087 TPY; and,
 - d. visible particulate emissions shall not exceed 20 percent (20%) opacity, as a six-minute average, while the emissions unit is in operation.
3. The applicable emission limitations and/or control requirements for emissions unit B044 are as follows:
- a. the permittee shall burn only natural gas and the maximum heat input shall not exceed 20.9 MMBTU/hour;
 - b. the permittee shall employ low-NO_x burners to limit NO_x emissions to 0.033 pound-NO_x/MMBTU of heat input;
 - c. NO_x emissions shall not exceed 0.033 pound/MMBTU of heat

input, 0.69 pound/hour, and 3.02 TPY. VOC emissions shall not exceed 0.11 pound/hour and 0.48 TPY. CO emissions shall not exceed 0.23 pound/hour and 1.00 TPY. PM emissions shall not exceed 0.02 pound/hour and 0.87 TPY; and,

- d. visible particulate emissions shall not exceed 20 percent (20%) opacity, as a six-minute average, while the emissions unit is in operation.

B. MONITORING AND/OR RECORDKEEPING REQUIREMENTS

1. The permittee shall properly install, operate and maintain equipment to continuously monitor the ammonia/gas ratio while emissions unit P010 is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

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

- a. the ammonia/gas ratio, in gallons per cubic ft natural gas, on a once per shift basis; and,
 - b. the operating times for the control device, monitoring equipment, and the associated emissions unit.
2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the inlet duct temperature of the selective catalyst reduction control device when emissions unit P010 is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

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

- a. all 3-hour blocks of time during which the average inlet duct temperature of the selective catalyst reduction control device, when the emissions unit P010 was in operation, was less than 700 degrees Fahrenheit; and,
- b. the operating times for the control device, monitoring equipment, and the associated emissions unit.

3. The permittee shall collect and record the following information each month for emissions unit P010:
 - a. the natural gas usage rate, in scf/month;
 - b. the average BTU content of fuel specified by natural gas supplier BTU/SCF;
 - c. the heat input rate (a) X (b) in MMBTU/month;
 - d. the hours of operation for the month;
 - e. the average hourly heat input rate (c)/(d);
 - f. the average hourly NO_x emission rate to be determined by multiplying (e) by either 0.10 pound-NO_x/MMBTU, or the NO_x emissions rate (in pound/MMBTU) established at the time of stack testing, whichever number is greater;
 - g. the monthly NO_x emission rate to be determined by multiplying (c) by either 0.10 pound-NO_x/MMBTU, or the NO_x emissions rate (in pound/MMBTU) established at the time of stack testing, whichever number is greater; and,
 - h. the total cumulative NO_x emissions for the calendar year [summation of (g) from January 1 through December 31, both inclusive].
4. The permittee shall follow the same procedure outlined in Section (B)(3), using the emissions rate of 0.033 pound-NO_x/MMBTU in (B)(3)(g) & (B)(3)(h) above [instead of 0.10 pound-NO_x/MMBTU], to calculate the monthly NO_x emissions and total cumulative NO_x emissions for the calendar year. If at the time of stack testing, a higher emissions rate (pound/MMBTU) is established for B043 and/or B044 that number shall be used instead.
5. All records required by this permit shall be retained in the permittee's files for a period of not less than five (5) years (except records required by NSPS Subpart Dc, listed above, which shall be kept for a period of not less than two (2) years). All records required in this permit shall be made available to the Ohio EPA, upon request, for review during normal business hours.

C. REPORTING REQUIREMENTS

1. The permittee shall submit a quarterly report documenting any exceedance of the emissions limitations/usage/ operational restrictions of this permit to the Ohio EPA Northwest, District Office. For each exceedance, the permittee shall also provide the following additional information:
 - a. the cause of the excursion; and,
 - b. the action that has been taken and/or will be taken to correct the violation and prevent further occurrences.

The report shall be submitted by January 15, April 15, July 15, and October 15 and shall cover the previous 3 month period. If no exceedances occurred, a report stating that fact is still required. All reports are to be submitted to the Ohio EPA, Northwest District Office, 347 North Dunbridge Road, Bowling Green, Ohio, 43402.

2. The permittee shall also submit annual reports which specify the total NO_x emissions from emissions unit P010, B043 and B044 for the previous calendar year. These reports shall be submitted by January 31 of each year.

D. TESTING REQUIREMENTS/COMPLIANCE DETERMINATION METHODS

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

- a. Emission Limitation(s)
P010

0.10 pound-NO_x/MMBTU, 7.68 pounds-NO_x/hour & 33.68 TPY-NO_x

1.27 pounds-CO/hour & 5.60 TPY-CO

1.03 pound-PM/hour & 4.5 TPY-PM

0.21 pound-VOC/hour & 0.9 TPY-VOC

3.99 TPY Ammonia

Applicable Compliance Method

Compliance with the PM emissions limit shall be determined in accordance with OAC 3745-17-03(B)(10). In the absence of Ohio EPA requiring such testing, compliance shall be determined using the emissions data from the most recent compliance test.

Compliance for the NO_x emissions limit shall be based upon the recordkeeping specified in Section (B)(3) above, and the Performance Test Requirements section in this permit and shall employ the following test method to demonstrate compliance with the allowable mass emission rate: for NO_x, Method 7 of 40 CFR Part 60, Appendix A. Alternate U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

Note: The hourly CO and VOC limits represent the unit's "maximum capacity" i.e., its potential to emit based on maximum operating conditions specified in condition (A)(1) above. Although this permit does not require periodic recordkeeping to verify compliance with this limit, the permittee shall maintain adequate records in the facility's files to verify that the unit's maximum capacity has not increased.

In addition to the above, the permittee shall follow the requirements under the Performance Test Requirements section in this permit and shall employ the following test method to demonstrate compliance with the allowable mass emission rate: for CO, Method 10 of 40 CFR Part 60, Appendix A. Alternate U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

Compliance with the ammonia emissions limit from ducts no. 1 and 2 shall be determined by the following formula:

$$\text{NH}_3 \text{ (ppmd)} \times \text{Flue gas Flowrate (dscf)} \times (4.42 \text{ E-}8) \times 8,760 \text{ hours/year}$$

b. Emission Limitation
B043 and B044

0.033 pound-NO_x/MMBTU, 0.69 pound-NO_x/hour & 3.02 TPY-NO_x
0.23 pound-CO/hour & 1.0 TPY-CO
0.02 pound-PM/hour & 0.87 TPY-PM
0.11 pound-VOC/hour & 0.48 TPY-VOC

Applicable Compliance Method

Compliance with the PM emissions limit shall be determined in accordance with OAC 3745-17-03(B)(10). In the absence of Ohio EPA requiring such testing, compliance shall be determined using the emissions data from the most recent compliance test.

Compliance for the NO_x emissions limit shall be based upon the recordkeeping specified in Section (B)(4) above.

Note: The hourly CO and VOC limit represents the unit's "maximum capacity" i.e., its potential to emit based on maximum operating conditions specified in condition (A)(2) and (3). Although this permit does not require periodic recordkeeping to verify compliance with these limits, permittee shall maintain adequate records in the facility's files to verify that the unit's maximum capacity has not been increased.

In addition to the above, the permittee shall follow the requirements under the Performance Test Requirements section in this permit and shall employ the following test method to demonstrate compliance with the allowable mass emission rate: for CO, Method 10 of 40 CFR Part 60, Appendix A. Alternate U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

- c. Emission Limitation
P010, B043 and B044

20 percent opacity as a six-minute average

Applicable Compliance Method

Compliance with the visible emission limitations shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(1).

E. MISCELLANEOUS REQUIREMENTS

1. For purposes of clarification, in accordance with OAC rule 3645-15-06, the applicant is required to shut down the emissions unit contained within

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this permit immediately if the control devices associated with a specific emissions unit contained within this permit malfunction.