



State of Ohio Environmental Protection Agency

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

Street Address:

122 S. Front Street

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

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049

**Application No: 01-08180**

**DATE: 6/7/00**

General Electric Circleville Lamp Plant  
Michelle Culpepper  
559 E Ohio St  
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, Manager  
Field Operations and Permit Section  
Division of Air Pollution Control

CC: USEPA

CDO



STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install

Issue Date: 6/7/00

**FINAL PERMIT TO INSTALL 01-08180**

Application Number: 01-08180  
APS Premise Number: 0165010026  
Permit Fee: **\$400**  
Name of Facility: General Electric Circleville Lamp Plant  
Person to Contact: Michelle Culpepper  
Address: 559 E Ohio St  
Circleville, OH 43113

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**559 E Ohio St**  
**Circleville, Ohio**

Description of proposed emissions unit(s):  
**Group 15 lamp assembly plant.**

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.11 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.

**General Electric Circleville Lamp Plant**

**Facility ID: 0165010026**

**PTI Application: 01-08180**

**Issued: 6/7/00**

**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.

**General Electric Circleville Lamp Plant**  
**PTI Application: 01-08180**  
**Issued: 6/7/00**

**Facility ID: 0165010026**

**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.

**General Electric Circleville Lamp Plant**  
**PTI Application: 01-08180**  
**Issued: 6/7/00**

**Facility ID: 0165010026**

**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 are inadequate 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 prove to be inadequate 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. 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.

**10. 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.

**11. 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>
NOx	7.0
CO	5.5
SO2	5.5
PM	0.9
VOC	14.2
Hg	0.026

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**General Electric Circleville Lamp Plant**

**PTI Application: 01-08180**

**Issued: 6/7/00**

**Facility ID: 0165010026**

**General Electric Circleville Lamp Plant**

**PTI Application: 01-09190**

**Issued**

**Facility ID: 0165010026**

Emissions Unit ID: P020

**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>	
P020 - Lamp assembly line - Group 15 with baghouse	OAC rule 3745-31-05 (A)(3)	OAC rule 3745-17-07 (A)
		OAC rule 3745-18-06 (E)
		OAC rule 3745-21-07 (G)(2)
	OAC rule 3745-17-11 (B)(1)	

**Gener**

**PTI A**

**Issued: 6/7/00**

Emissions Unit ID: P020

Applicable Emissions  
Limitations/Control  
Measures

Particulate matter emissions shall not exceed 0.20 pound per hour and 0.9 ton per year.

Sulfur dioxide emissions shall not exceed 1.25 pounds per hour and 5.5 tons per year.

Nitrogen oxide emissions shall not exceed 1.60 pounds per hour and 7.0 tons per year.

Carbon monoxide emissions shall not exceed 1.25 pounds per hour and 5.5 tons per year.

Volatile organic compound emissions shall not exceed 3.25 pounds per hour and 14.2 tons per year.

Mercury emissions shall not exceed 0.006 pound per hour and 0.026 ton per year.

See A.I.2.a,c below.

The emission limitation specified by this rule is less stringent than the emission limitations established pursuant to OAC rule

3745-31-05 (A)(3).

Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

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

See A.I.2.b below.

## **2. Additional Terms and Conditions**

- 2.a** Permittee shall use water based coatings at all times this emissions unit is in operation.
- 2.b** Pursuant to OAC rule 3745-21-07 (G)(9), this emissions unit is exempt from the emission limitations specified in OAC rule 3745-21-07 (G)(2) because there are no photochemically reactive materials employed in this emissions unit.
- 2.c** Permittee shall vent all emissions from this emissions unit through a baghouse.

## **II. Operational Restrictions**

- 1. The permittee shall burn only natural gas in this emissions unit.
- 2. The pressure drop across the baghouse shall be maintained within the range of 2-4 inches of water while the emissions unit is in operation.

## **III. Monitoring and/or Recordkeeping Requirements**

- 1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- 2. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack 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 abnormal visible emission incident; and
  - e. any corrective actions taken to eliminate the abnormal visible emissions.
- 3. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a weekly basis.

#### IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the abnormal 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.
3. The permittee shall submit pressure drop deviation (excursion) reports that identify that all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.

#### V. Testing Requirements

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

- a. Emission Limitation -  
Particulate matter emissions shall not exceed 0.20 pound per hour and 0.9 ton per year.

Applicable Compliance Method -

Compliance with the short and long term emission limitations shall be demonstrated by summing the combustion and assembly operation emissions.

The short term combustion emissions shall be calculated by multiplying the emission factor for natural gas combustion of 7.6 lbs PM/mm<sup>3</sup>.ft. (AP-42, 1998) by the maximum dryer throughput of 13,300 cu.ft./hr. The short term assembly operation emissions shall be calculated by the baghouse emission rate of 0.10 lb/hr.

The long term combustion emissions shall be calculated by multiplying the maximum short term emissions by 8760 hours per year and dividing by 2000 pounds per ton. The long term assembly operation emissions shall be calculated by multiplying the baghouse emission rate by 8760 hours per year and dividing by 2000 pounds per ton.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR, Part 60, Appendix A, Method 1 thru 5 and the procedures specified in OAC rule 3745-17-03 (B)(9).

- b. Emission Limitation -  
Sulfur dioxide emissions shall not exceed 1.25 pounds per hour and 5.5 tons per year.

Applicable Compliance Method -

Compliance with the short and long term emission limitations shall be demonstrated by summing the combustion and assembly operation emissions.

The short term combustion emissions shall be calculated by multiplying the emission factor for natural gas combustion of 0.6 lbs SO<sub>2</sub>/mmcu.ft. (AP-42, 1998) by the maximum dryer throughput of 13,300 cu.ft./hr. The short term assembly operation emissions shall be calculated by multiplying the emission rate of 0.825 lb/hr (SEC, Inc., Chemical Usage Evaluation, 1997) by the percent increase in throughput of 25% (1.25).

The long term combustion emissions shall be calculated by multiplying the maximum short term emissions by 8760 hours per year and dividing by 2000 pounds per ton. The long term assembly operation emissions shall be calculated by multiplying the maximum short term emissions by 8760 hours per year and dividing by 2000 pounds per ton.

c. Emission Limitation -

Nitrogen oxide emissions shall not exceed 1.60 pounds per hour and 7.0 tons per year.

Applicable Compliance Method -

Compliance with the short term emission limitation shall be demonstrated by multiplying the emission factor for natural gas combustion of 100 lbs NO<sub>x</sub>/mmcu.ft. (AP-42, 1998) by the maximum dryer throughput of 13,300 cu.ft./hr.

Compliance with the long term emission limitation shall be demonstrated by multiplying the maximum hourly emission rate by 8760 hours per year and dividing by 2000 pounds per ton.

d. Emission Limitation -

Carbon monoxide emissions shall not exceed 1.25 pounds per hour and 5.5 tons per year.

Applicable Compliance Method -

Compliance with the short term emission limitation shall be demonstrated by multiplying the emission factor for natural gas combustion of 84 lbs CO/mmcu.ft. (AP-42, 1998) by the maximum dryer throughput of 13,300 cu.ft./hr.

Compliance with the long term emission limitation shall be demonstrated by multiplying the maximum hourly emission rate by 8760 hours per year and dividing by 2000 pounds per ton.

e. Emission Limitation -

**General Electric Circleville Lamp Plant**

PTI Application: 01-00100

Issued

Facility ID: 0165010026

Emissions Unit ID: P020

Volatile organic compound emissions shall not exceed 3.25 pounds per hour and 14.2 tons per year.

**Applicable Compliance Method -**

Compliance with the short and long term emission limitations shall be demonstrated by summing the combustion operation and the two assembly operation emissions.

The short term combustion emissions shall be calculated by multiplying the emission factor for natural gas combustion of 5.5 lbs VOC/mm<sup>3</sup>.ft. (AP-42, 1998) by the maximum dryer throughput of 13,300 cu.ft./hr. The short term assembly "headmarking" operation emissions shall be calculated by multiplying the emission rate of 0.38 lb/hr (SEC, Inc., Chemical Usage Evaluation, 1997) by the percent increase in throughput of 25% (1.25). The short term assembly "base cement" operation emissions shall be calculated by multiplying the emission rate of 1.93 lb/hr (SEC, Inc., Chemical Usage Evaluation, 1997) by the percent increase in throughput of 25% (1.25).

Compliance with the long term emission limitation shall be calculated by multiplying the maximum hourly emission rate by 8760 hours per year and dividing by 2000 pounds per ton. The long term assembly operation emissions shall be calculated by multiplying the maximum short term emissions by 8760 hours per year and dividing by 2000 pounds per ton.

**f. Emission Limitation -**

Mercury emissions shall not exceed 0.006 pound per hour and 0.026 tons per year.

**Applicable Compliance Method -**

Compliance with the short term emission limitation shall be demonstrated by the maximum emissions of 0.002 lb/hr (SEC, Inc., Chemical Usage Evaluation, 1997) by the percent increase in throughput of 25% (1.25).

The long term assembly operation emissions shall be demonstrated by multiplying the maximum short term emissions by 8760 hours per year and dividing by 2000 pounds per ton.

**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>
P020 - Lamp Assembly Line - Group 15		

**2. Additional Terms and Conditions**

- 2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

1. The permit to install for this emissions unit P020 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: n-propyl alcohol

TLV (mg/m3): 492

Emissions Unit ID: P020

Maximum Hourly Emission Rate (lbs/hr): 3.25

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 548.2

MAGLC (ug/m3): 11,714

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

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

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

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

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

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**Gener**

**PTI A**

**Issued: 6/7/00**

Emissions Unit ID: P020

**IV. Reporting Requirements**

None

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**Gener**

**PTI A**

**Issued: 6/7/00**

Emissions Unit ID: P020

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

**NEW SOURCE REVIEW FORM B**

PTI Number: 01-08180 Facility ID: 0165010026

FACILITY NAME General Electric Circleville Lamp Plant

FACILITY DESCRIPTION Group 15 lamp assembly plant. CITY/TWP Circleville

SIC CODE 3641 SCC CODE 31399999 EMISSIONS UNIT ID P020

EMISSIONS UNIT DESCRIPTION Lamp Assembly Line - Group 15

DATE INSTALLED 8/01/00

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter		0.20	0.9	0.20	0.9
PM <sub>10</sub>					
Sulfur Dioxide		1.25	5.5	1.25	5.5
Organic Compounds		3.25	14.2	3.25	14.2
Nitrogen Oxides		1.60	7.0	1.60	7.0
Carbon Monoxide		1.25	5.5	1.25	5.5
Lead					
Other: Air Toxics	Mercury	0.006	0.026	0.006	0.026

APPLICABLE FEDERAL RULES:

NSPS?                      NESHAP?                      PSD?                      OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

See additional terms and conditions.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ \_\_\_\_\_

**TOXIC AIR CONTAMINANTS**

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED\*?                      X                      YES                                                  NOIDENTIFY THE AIR CONTAMINANTS: n-propyl alcohol

**NEW SOURCE REVIEW FORM B**

PTI Number: 01-08180 Facility ID: 0165010026

FACILITY NAME General Electric Circleville Lamp Plant

FACILITY DESCRIPTION Group 15 lamp assembly plant. CITY/TWP Circleville

**Ohio EPA Permit to Install Information Form** Please describe below any documentation which is being submitted with this recommendation (must be sent the same day). Electronic items should be submitted with the e-mail transmitting the PTI terms, and in software that CO can utilize. If mailing any hard copy, this section must be printed as a cover page. All items must be clearly labeled indicating the PTI name and number. Submit **hard copy items to Pam McGraner**, AQM&P, DAPC, Central Office, and electronic files to [airpti@epa.state.oh.us](mailto:airpti@epa.state.oh.us)

Please fill out the following. If the checkbox does not work, replace it with an 'X'

	Electronic	<u>Additional information</u> File Name Convention (your PTI # plus this letter)	Hard Copy	None
<u>Calculations (required)</u>	<input type="checkbox"/>	0000000c.wpd	<input type="checkbox"/>	
Modeling form/results	<input checked="" type="checkbox"/>	0000000s.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PTI Application (complete or partial)*	<input type="checkbox"/>	0000000a.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
BAT Study	<input type="checkbox"/>	0000000b.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other/misc.	<input type="checkbox"/>	0000000t.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>

\* Mandatory for netting, PSD, nonattainment NSR, 112(g), 21-07(G)(9)(g) and 21-09(U)(2)(f) - 2 complete copies.

Please complete (see comment bubble to the left for additional instructions):

**NSR Discussion**

GE Circleville Lamp Plant has requested an increase in throughput and emissions to an existing production line. The emissions unit is a lamp assembly line with a natural gas fired Lehr.

Calculations are as follows:

Natural gas combustion emissions:

Maximum capacity of Lehr = 13,300 ft<sup>3</sup>/hr

Emission factors from AP-42, 1998.

NO<sub>x</sub>: 13,300 ft<sup>3</sup>/hr x 100 lb/mm<sup>3</sup>ft = 1.33 lbs/hr

1.33 lb/hr x 8760/2000 = 5.8 tons per year

CO: 13,300 ft<sup>3</sup>/hr x 84 lb/mm<sup>3</sup>ft = 1.12 lbs/hr

1.12 lb/hr x 8760/2000 = 4.9 tons per year

SO<sub>2</sub>: 13,300 ft<sup>3</sup>/hr x 0.6 lb/mm<sup>3</sup>ft = 0.008 lbs/hr

0.008 lb/hr x 8760/2000 = 0.03 tons per year

PM: 13,300 ft<sup>3</sup>/hr x 7.6 lb/mm<sup>3</sup>ft = 0.10 lbs/hr

0.10 lb/hr x 8760/2000 = 0.4 tons per year

VOC: 13,300 ft<sup>3</sup>/hr x 5.5 lb/mm<sup>3</sup>ft = 0.07 lbs/hr

0.07 lb/hr x 8760/2000 = 0.3 tons per year

Lamp assembly emissions:

**NEW SOURCE REVIEW FORM B**

PTI Number: 01-08180 Facility ID: 0165010026

FACILITY NAME General Electric Circleville Lamp Plant

FACILITY DESCRIPTION Group 15 lamp assembly plant. CITY/TWP Circleville

The original emission factors were calculated assuming that the maximum bulb rate was 3200 bulbs per hour. Following issuance of this permit the rate will be 4000 bulbs per hour. The emission calculations reflect the proposed increase. The emission calculations reflect the unit's potential to emit however GE requested higher emission rates than calculated below to offer a small amount of flexibility.

SO<sub>2</sub>: 0.825 lb/hr (SEC, Inc. Chemical Usage Evaluation) x 4000/3200 = 1.03 lb/hr  
1.03 lb/hr x 8760/2000 = 4.5 tons per year

PM: 0.10 lb/hr (emission rate from baghouse)  
0.10 lb/hr x 8760/2000 = 0.44 tons per year

VOC: Headmarking - 0.38 lb/hr (SEC, Inc. Chemical Usage Evaluation) x 4000/3200 = 0.48 lb/hr  
0.48 lb/hr x 8760/2000 = 2.1 tons per year

Base Cement - 1.93 lb/hr (SEC, Inc. Chemical Usage Evaluation) x 4000/3200 = 2.41 lb/hr  
2.41 lb/hr x 8760/2000 = 10.56 tons per year

Hg: 0.0002 lb/hr (SEC, Inc. Chemical Usage Evaluation) x 4000/3200 = 0.00025 lb/hr  
0.00025 lb/hr x 8760/2000 = 0.001 tons per year

**TOTALS:**

NO<sub>x</sub> - 1.33 lb/hr  
5.8 tons per year

CO - 1.12 lb/hr  
4.9 tpy

SO<sub>2</sub> - 0.008 + 1.03 = 1.04 lb/hr  
0.03 + 4.5 = 4.5 tpy

PM - 0.10 + 0.10 = 0.20 lb/hr  
0.4 + 0.4 = 0.8 tpy

VOC - 0.07 lb/hr + 0.48 + 2.41 = 2.96 lb/hr  
0.3 + 2.1 + 10.56 = 13.0 tpy

Hg - 0.00025 lb/hr  
0.001 tpy

The permit does not trigger any additional permitting requirements.

Ohio's Air Toxic Policy applied to this emissions unit and modeling was performed. I assumed that all of the emissions

**NEW SOURCE REVIEW FORM B**

PTI Number: 01-08180 Facility ID: 0165010026

FACILITY NAME General Electric Circleville Lamp Plant

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were coming from one stack and were one pollutant. No exceedances of the MAGLC were predicted.

If you have any questions, feel free to give me a call at 8-3811.

Thanks,  
Adam

Please complete for these type permits (For PSD/NSR Permit, place mouse over this text):

Synthetic Minor Determination and/or  Netting Determination  
Permit To Install ENTER PTI NUMBER HERE

- A. [Source Description](#)
- B. [Facility Emissions and Attainment Status](#)
- C. [Source Emissions](#)
- D. [Conclusion](#)

PLEASE PROVIDE ADDITIONAL NOTES OR COMMENTS AS NECESSARY:  
NONE

Please complete:

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

<u>Pollutant</u>	<u>Tons Per Year</u>
NOx	7.0
CO	5.5
SO2	5.5
PM	0.9
VOC	14.2
Hg	0.026