State of Ohio Environmental Protection Agency

Street Address:
Lazarus Gov. Center
122 S. Front Street
Columbus, OH 43215

TELE: (614) 644-3020 **FAX:** (614) 644-2329

Mailing Address:
Lazarus Gov. Center
P.O. Box 1049
Columbus, OH 43216-1049

RE: FINAL PERMIT TO INSTALL
CRAWFORD COUNTY
Application No: 03-16008

CERTIFIED MAIL

	TOXIC REVIEW
	PSD
	SYNTHETIC MINOR
	CEMS
	MACT
	NSPS
	NESHAPS
	NETTING
	MAJOR NON-ATTAINMENT
	MODELING SUBMITTED
	GASOLINE DISPENSING FACILITY

DATE: 8/21/2003

GE Bucyrus Lamp Plant
Chris Bruni
1250 South Walnut Street
Bucyrus, OH 44820

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
309 South Fourth Street, Room 222
Columbus, Ohio 43215

Sincerely,

Michael W. Ahern

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

CC: USEPA **NWDO**

FINAL PERMIT TO INSTALL 03-16008

Application Number: 03-16008

APS Premise Number: 0317010010

Permit Fee: **$500**

Name of Facility: GE Bucyrus Lamp Plant

Person to Contact: Chris Bruni

Address: 1250 South Walnut Street
Bucyrus, OH 44820

Location of proposed air contaminant source(s) [emissions unit(s)]:
1250 South Walnut Street
Bucyrus, Ohio

Description of proposed emissions unit(s):
Chapter 31 modification to PTI 03-13538, issued 5/8/03 for emissions unit P006 to include a bulb crushing 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

Facility ID: **0317010010**

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 <u>emission limitations</u>, <u>operational restrictions</u>, <u>and control device operating parameter limitations</u>, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.9 below if no deviations occurred during the quarter.

iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

2. Scheduled Maintenance/Malfunction Reporting

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

3. Risk Management Plans

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

4. Title IV Provisions

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

5. Severability Clause

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

6. General Requirements

a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.

b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.

c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

d. This permit does not convey any property rights of any sort, or any exclusive privilege.

e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

7. Fees

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

8. Federal and State Enforceability

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

9. Compliance Requirements

a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:

i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.

iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

10. Permit To Operate Application

a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be <u>obtained before</u> the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is

granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

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

12. Air Pollution Nuisance

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

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

1. Compliance Requirements

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

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

a. Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

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

3. Permit Transfers

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

4. Termination of Permit To Install

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

5. Construction of New Sources(s)

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

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

6. Public Disclosure

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

7. Applicability

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

8. Construction Compliance Certification

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

9. Additional Reporting Requirements When There Are No Deviations of <u>Federally Enforceable</u> 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

Pollutant	Tons Per Year
OC	35.70
PE	0.13
NOx	14.98
CO	12.40
SO2	3.68
Hg	0.002

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P006 - L-4 High Speed Horizontal Lamp Assembly Line (Line J) - Coating, End Brushing, Natural Gas Combustion, Bulb Crushing and Mercury Evacuation with Fabric Filters and Carbon Adsorber (Chapter 31 modification to PTI 03-13538, issued 5/8/03 to include bulb crushing system).	OAC rule 3745-31-05 (A)(3)	See A.I.2.g Coating Emissions 8.15 lbs of organic compounds (OC)/hour (see A.I.2.a); 35.70 tons of OC/year Cleanup Emissions 2.82 lbs of OC/month; 0.02 ton of OC/year Natural Gas Emissions 3.37 lbs of nitrogen oxides (NOx)/hour; 14.76 tons of NOx/year 2.83 lbs of carbon monoxide (CO)/hour; 12.40 tons of CO/year Binder Combustion Emissions 0.05 lb of NOx/hour; 0.22 ton of NOx/year End Brushing Emissions 0.008 lb of particulate emissions (PE)/hour; 0.04 ton of PE/year Visible PE shall not exceed 5% opacity as a six-minute average SO_2 Lubricant Emissions 0.84 lb of SO_2/hour; 3.68 tons of SO_2/year

	<u>Mercury Evacuation System Emissions</u> 0.0004 lb of Mercury (Hg)/hour; 0.002 ton of Hg/year <u>Bulb Crushing Emissions</u> 0.02 lb PE/hour; 0.09 ton PE/year Visible PE shall not exceed 0% opacity as a six-minute average The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(U)(1) and OAC rule 3745-21-07(G)(2)
OAC rule 3745-21-09(U)(1)(c)	3.5 pounds of volatile organic compounds (VOC) per gallon of coating, excluding water and exempt solvents [for the coatings used for metal parts (base cement coatings)]
OAC rule 3745-17-11(B)(2)	See A.I.2.b
OAC rule 3745-17-07(A)(1)	See A.I.2.c
OAC rule 3745-18-06(E)	Exempt (see A.I.2.d)
OAC rule 3745-21-07(G)	OC emissions shall not exceed 8 pounds per hour and 40 pounds per day (see A.2.e)
OAC rule 3745-23-06(B)	See A.I.2.f
OAC rule 3745-21-08(B)	See A.I.2.f

2. Additional Terms and Conditions

2.a This emissions unit is subject to 8.15 lbs of OC/hour from coating operations at all times except for when subject to OAC rule 3745-21-07(G)(2) as specified in section A.I.2.e.

2.b The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 lbs/hr. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply since the facility is located in Crawford County, which is identified as a P-2 county.

2.c This emissions unit is exempt from the visible particulate emission limitations specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because OAC rule 3745-17-11 is not applicable.

2.d The maximum process weight rate for this emissions unit is less than 1000 lbs/hr. Therefore, pursuant to OAC rule 3745-18-06 (C), this emissions unit is exempt from OAC rule 3745-18-06 (E).

2.e This emissions unit becomes subject to OAC rule 3745-21-07 (G)(2) on each day any photochemically reactive material is used (coating or cleanup material) in an operation involving non-metal substrates.

2.f The permittee has satisfied the "latest available control techniques and operating practices required pursuant to OAC rule 3745-23-06 (B) and the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 (B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05 (A) (3) in this permit to install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally approved SIP for Ohio.

2.g Best available technology (BAT) control requirements have been determined to be the following:

i. Use of a baghouse (fabric filter) for particulate emissions from the end brushing operation; the fabric filter shall achieve an overall control efficiency of 99%.

ii. Use of a carbon adsorber for mercury emissions from the mercury evacuation system; the carbon adsorber shall achieve a maximum outlet emission rate of 0.0004 pounds of mercury per hour.

iii. Use of a baghouse (fabric filter) for particulate emissions from the bulb crushing system; the fabric filter shall achieve an overall control efficiency of 99%.

II. Operational Restrictions

1. The pressure drop across the carbon adsorber shall be maintained within the range of 0.01 - 5.0 inches of water while the emissions unit is in operation.

2. The pressure drop across the end brushing operation baghouse shall be maintained within the range of 0.50 - 5.0 inches of water while the emissions unit is in operation.

3. The pressure drop across the bulb crushing system baghouse shall be maintained within the range of 6.0 - 10.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall maintain daily records that document whether the following materials are photochemically reactive as defined in OAC rule 3745-21-01(C)(5):

   a. each coating/ink applied to a non-metal substrate;

   b. all cleanup materials employed

2. On any day when any photochemically reactive coating/ink or cleanup material is used in an operation involving non-metal substrates, the permittee shall collect and record the following information for this emissions unit for such day:

   a. the company name and identification of the following:

      i. each coating and/or ink employed on a non-metal substrate
      ii. each photochemically reactive cleanup material employed;

   b. the total number of lamps processed.

   c. the OC emissions from coating and/or ink usage on a non-metal substrate, as calculated in accordance with the following equation:

      OC Emissions = (# of lamps processed/day) x (A + B + C + D + E + F + G + H + I)

      where

      A = Emission factor for surfactant phosphor coating:
      lb of coating/1000 lamps x % OC by weight = lb of OC/1000 lamps

      B = Emission factor for monoethanolamine phosphor coating:
      lb of coating/1000 lamps x OC by weight = lb of OC/1000 lamps

      C = Emission factor for Monogram Ink:
      lb of ink/1000 lamps x% OC by weight = lb of OC/1000 lamps

      D = Emission factor for diluent solvent for monogram ink:
      lb of solvent/1000 lamps x % OC by weight = lb of OC/1000 lamps

      E = Emission factor for headmarking ink:
      lb of ink/1000 lamps x% OC by weight = lb of OC/1000 lamps

      F = Emission factor for diluent solvent for headmarking ink:
      lb of solvent/1000 lamps x % OC by weight = lb of OC/1000 lamps

G = Emission factor for E-Mix:
lb of E-Mix/1000 lamps x % OC by weight = lb of OC/1000 lamps

H = Emission factor for diluent solvent for E-Mix:
lb of solvent/1000 lamps x % OC by weight = lb of OC/1000 lamps

I = Emission factor for Dry-Film:
lb of Dry-Film/1000 lamps x % OC by weight = lb of OC/1000 lamps

d. the OC content of each photochemically reactive cleanup material employed, in pounds per gallon;

e. the number of gallons of each photochemically reactive cleanup material employed;

f. the OC emissions from each photochemically reactive cleanup material employed (A.III.2.d x A.III.2.e);

g. the total OC emissions from all photochemically reactive cleanup materials employed (summation of C.5.f), in lbs;

h. the total number of hours the emissions unit was involved in the operation of coating of non-metal substrates and cleanup operations using photochemically reactive material; and

i. the average hourly organic compound emission rate involving the operation of coating non-metal substrates [(A.III.2.c + A.III.2.g)/A.III.2.h)], in pounds per hour (average).

[Note: The coating information must be for the coatings as employed, including any thinning solvents added at the emissions unit. Also, the definitions of "photochemically reactive" and "nonphotochemically reactive" are based upon OAC rule 3745-21-01(C)(5).]

3. The permittee shall collect and record the following information when any coating (base cement) is applied to a metal substrate:

a. the company name and identification for each coating (base cement) employed on a metal substrate;

b. the VOC content of each coating (excluding water and exempt solvents), in pounds per gallon, employed on any metal substrate. The VOC content excluding water and exempt solvents shall be calculated in accordance with the equation specified in paragraph (B)(8) of OAC rule 3745-21-10 for $C_{VOC,2}$.

4. In conjunction with the coating information required in A.III.2 above, the permittee shall collect and record the following information each month for all OC emissions emitted (includes emissions from the use of photochemically reactive materials, non-photochemically reactive materials, and base cement) from lamp processing in this emissions unit:

a. the name and identification number of each coating, ink, and/or base cement employed;

b. the total number of lamps processed;

c. the total number of bases cemented;

d. the total OC emissions from coating and/or ink usage, as calculated in accordance with the following equation:

OC Emissions = (# of lamps processed/month) x (A + B + C + D + E + F + G + H + I)

(with A through I as in A.III.2 above)

e. the total OC emissions from base cement usage, as calculated in accordance with the following equation:

OC Emissions = (# of bases cemented/month) x (EF)

where

EF = Emission factor for Base Cement:
lb OC/1000 bases x % OC by wt x 98% emitted = lb OC/1000 bases

OC Emissions = (# of bases cemented/month) x (lb of OC/1000 bases)

f. The total OC emissions from lamp processing [(d x b) + (e x c)], in pounds per month.

g. The annual, year to date OC emissions from all coating, inks, and base cements employed (sum of A.III.4.f), in tons, for each calendar month to date from January to December.

5. In conjunction with the cleanup material information required in A.III.2 above, the permittee shall collect and record the following information each month for all cleanup materials employed in this emissions unit:

a. the name and identification of each cleanup material employed;

b. the OC content of each cleanup material employed, in pounds per gallon;

c. the number of gallons of each cleanup material employed;

d. the OC emissions from each cleanup material employed (A.III.5.b x A.III.5.c);

e. the total OC emissions from all cleanup materials employed (summation of A.III.5.d), in pounds or tons;

f. the annual year to date OC emissions from cleanup operations, in tons per year (summation of A.III.5.e for each calendar month to date from January to December).

6. The permittee shall operate and maintain a continuous monitor which measures and records the pressure drop from the carbon adsorber serving vacuum pumps for this emissions unit. The monitor 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 pressure drop across the carbon adsorber.

   b. A log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit(s).

7. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop while the emissions unit is in operation across the following:

   a. The pressure drop across the baghouse (fabric filter) controlling end brushing operations;

   b. The pressure drop across the baghouse (fabric filter) controlling bulb crushing operations

   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 each baghouse on a weekly basis.

IV. Reporting Requirements

1. The permittee shall notify the Northwest District Office in writing of any monthly record showing the use of base cement exceeding 3.5 pounds of volatile organic compounds (VOC) per gallon of coating, excluding water and exempt solvents. The notification shall include a copy of such record and shall be sent to the Northwest District Office within 30 days following the end of the calendar month.

2. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the carbon adsorber did not comply with the allowable range specified in section A.II.1 of the terms and conditions of this permit.

3. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the end brushing operation baghouse and/or the bulb crushing system baghouse did not comply with the allowable range specified in section A.II.2 of the terms and conditions of this permit.

V. Testing Requirements

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

a. Emission Limitation
8.15 lbs of OC/hour

Applicable Compliance Method
The hourly limitation represents the potential to emit* of the emissions unit. Therefore, no monitoring and Record keeping, reporting, or compliance method calculations are required to demonstrate compliance with this limitation.

* The potential to emit for this emissions unit is based on the summation of emissions generated during lamp manufacturing and emissions generated during lamp base cementing. The following outlines potential emissions generated during each process:

i. Lamp manufacturing - the potential to emit for lamp manufacturing is 1.75 lbs of OC per hour based on the summation of emissions from the following components of the line and a maximum lamp manufacturing rate of 6,000 lamps per hour:

Phosphor Coating - 1.27 pounds of OC per hour (based on a maximum surfactant usage rate of 0.358 lb/1000 lamps and a maximum OC content of 8.3% by weight, plus a maximum monoethanolamine usage rate of 0.181 lb/1000 lamps and a maximum OC content of 100% by weight).

Monogram Ink - 0.01 pound of OC per hour (based on a maximum ink usage rate of 0.006 lb/1000 lamps and a maximum OC content of 30% by weight, plus a maximum diluent usage rate of 0.0002 lb/1000 lamps and a maximum OC content of 100% by weight).

Headmarking Ink - 0.05 pound of OC per hour (based on a maximum ink usage rate of 0.0063 lb/1000 lamps and a maximum OC content of 71% by weight, plus a maximum diluent solvent usage rate of 0.0037 lb/1000 lamps and maximum OC content of 100% by weight).

E-Mix - 0.32 pound of OC per hour (based on a maximum usage rate of 0.1607 lb/1000 lamps and a maximum OC content of 29% by weight, plus a maximum diluent solvent usage rate of 0.0068 lb/1000 lamps and a maximum OC content of 100% by weight).

Dry Film - 0.10 pound of OC per hour (based on a maximum usage rate of 0.0339 lb/1000 lamps and a maximum OC content of 50% by weight).

ii. Lamp base cementing - the potential to emit for lamp base cementing is 6.40 lbs of OC per hour based on a maximum lamp base cementing rate of 16,700 bases per hour and a maximum cement usage rate of 5.055 lbs/1000 bases, a maximum OC content of 7.74 % by weight and a maximum emission rate of 98% (2% of the OC is emitted during base cement mixing).

If required, the permittee shall demonstrate compliance in accordance with the test method and procedures in Method 18, 25, or 25a of 40 CFR Part 60, Appendix A.

b. Emission Limitation
35.70 tons of OC/year

Applicable Compliance Method
Compliance with the above emission limitation shall be demonstrated by the monitoring and record keeping requirements in section A.III.4.

c. Emission Limitation
2.82 lbs of OC/month from cleanup

Applicable Compliance Method
Compliance with the above emission limitation shall be demonstrated by the monitoring and record keeping requirements in section A.III.5.

d. Emission Limitation
0.02 tons of OC/year from cleanup

Applicable Compliance Method
Compliance with the above emission limitation shall be demonstrated by the monitoring and record keeping requirements in section A.III.5.

e. Emission Limitation:
3.37 lbs of NO_x/hour (natural gas combustion)

Applicable Compliance Method
The hourly NO_x emission limitation is based on the emission's unit's potential to emit*. Therefore, no hourly Record keeping, reporting, or compliance method calculations are required to demonstrate compliance with this limitation.

* The potential to emit for this emissions unit is based on a maximum natural gas usage rate of 33,675 ft^3/hr and an AP-42 emission factor of 100 lbs of NO_x/$MMft^3$ (AP-42, Section 1.4, Table 1.4-1 [7/98]).

If required, the permittee shall demonstrate compliance in accordance with the test methods and procedures in Methods 1-4 and 7 of 40 CFR Part 60, Appendix A.

f. Emission Limitation:
14.76 tons of NO_x/year (natural gas combustion)

Applicable Compliance Method
Compliance with the annual emission limitation shall be demonstrated by multiplying the hourly emission limitation by a maximum operating schedule of 8760 hours per year and dividing by a conversion factor of 2000 lbs per ton.

g. Emission Limitation:
2.83 lb of CO/hour (natural gas combustion)

Applicable Compliance Method
The hourly CO emission limitation is based on the emission's unit's potential to emit*. Therefore, no hourly Record keeping, reporting, or compliance method calculations are required to demonstrate compliance with this limitation.

* The potential to emit for this emissions unit is based on a maximum natural gas usage rate of 33,675 ft^3/hr and an AP-42 emission factor of 84 lbs of CO/$MMft^3$ (AP-42, Section 1.4, Table 1.4-1 [7/98]).

If required, the permittee shall demonstrate compliance in accordance with the test methods and procedures in Methods 1-4 and 10 of 40 CFR Part 60, Appendix A.

h. Emission Limitation:
12.40 tons of CO/year (natural gas combustion)

Applicable Compliance Method
Compliance with the annual emission limitation shall be demonstrated by multiplying the hourly emission limitation by a maximum operating schedule of 8760 hours per year and dividing by a conversion factor of 2000 lbs per ton.

i. Emission Limitation:
0.008 lb of PE/hour (end brushing)

Applicable Compliance Method
The hourly limitation represents the potential to emit* of the emissions unit. Therefore, no monitoring and Record keeping, reporting, or compliance method calculations are required to demonstrate compliance with this limitation.

* The potential to emit is based on a maximum phosphor coating application rate of 12.56 lbs/1000 lamps, a maximum end brushing rate of 6000 lamps per hour, a maximum of 1.0% of the phosphor coating applied being emitted as PE from end brushing and a control efficiency of 99%.

If required, the permittee shall demonstrate compliance in accordance with the test methods and procedures in Methods 1-5 of 40 CFR Part 60, Appendix A.

j. Emission Limitation:
0.04 ton of PE/year (end brushing)

Applicable Compliance Method
Compliance with the annual emission limitation shall be demonstrated by multiplying the hourly emission limitation by a maximum operating schedule of 8760 hours per year and dividing by a conversion factor of 2000 lbs per ton.

k. Emission Limitation:
Visible PE shall not exceed 5% opacity as a six-minute average

Applicable Compliance Method
If required, compliance shall be determined in accordance with the test method and procedures in Method 9 of 40 CFR Part 60, Appendix A.

l. Emission Limitation:
0.84 lb of SO_2/hour (SO_2 lubricant)

Applicable Compliance Method
The hourly limitation represents the potential to emit* of the emissions unit. Therefore, no monitoring and Record keeping, reporting, or compliance method calculations are required to demonstrate compliance with this limitation.

* The potential to emit is based on a maximum of 0.11 lb of SO_2/hour injected in the Lehr and 0.73 lb of SO_2/hour injected in the flare machines.

If required, the permittee shall demonstrate compliance in accordance with the test methods and procedures in Methods 1-4 and 6 of 40 CFR Part 60, Appendix A.

m. Emission Limitation:
3.68 tons of SO_2/year (SO_2 lubricant)

Applicable Compliance Method
Compliance with the annual emission limitation shall be demonstrated by multiplying the hourly emission limitation by a maximum operating schedule of 8760 hours per year and dividing by a conversion factor of 2000 lbs per ton.

n. Emission Limitation:
0.05 lb of NO_x/hour (binder combustion)

Applicable Compliance Method
The hourly limitation represents the potential to emit* of the emissions unit. Therefore, no monitoring and Record keeping, reporting, or compliance method calculations are required to demonstrate compliance with this limitation.

* The potential to emit is based on a maximum phosphor coating application rate of 12.56 lbs/1000 lamps, a maximum lamp processing rate of 6000 lamps per hour, and the following maximum content values: 0.11 lb of binder/lb of coating, and 0.0055 lb of NO_x/lb of binder.

If required, the permittee shall demonstrate compliance in accordance with the test methods and procedures in Methods 1-4 and 7 of 40 CFR Part 60, Appendix A.

o. Emission Limitation:
0.22 ton of NO_x/year (binder combustion)

Applicable Compliance Method
Compliance with the annual emission limitation shall be demonstrated by multiplying the hourly emission limitation by a maximum operating schedule of 8760 hours per year and dividing by a conversion factor of 2000 lbs per ton.

p. Emission Limitation:
0.0004 lb of Hg/hour

Applicable Compliance Method
The hourly limitation represents the potential to emit* of the emissions unit. Therefore, no monitoring and Record keeping, reporting, or compliance method calculations are required to demonstrate compliance with this limitation.

* The potential to emit is based a stack test conducted in 1995. If required, compliance shall be determined in accordance with the test method and procedures in Method 29 of 40 CFR Part 60, Appendix A.

q. Emission Limitation:
0.002 ton of Hg/year

Applicable Compliance Method
Compliance with the annual emission limitation shall be demonstrated by multiplying the hourly emission limitation by a maximum operating schedule of 8760 hours per year and dividing by a conversion factor of 2000 lbs per ton.

r. Emission Limitation:
0.02 lb PE/hour (bulb crushing)

Applicable Compliance Method
The hourly limitation represents the potential to emit* of the emissions unit. Therefore, no monitoring and Record keeping, reporting, or compliance method calculations are required to demonstrate compliance with this limitation.

* The potential to emit is based on a maximum bulb crushing rate of 1.50 tons bulbs crushed/hour, an emission factor of 1.50 lbs PE/ton bulbs crushed, and a control efficiency of 99%.

If required, the permittee shall demonstrate compliance in accordance with the test methods and procedures in Methods 1-5 of 40 CFR Part 60, Appendix A.

s. Emission Limitation:
0.09 ton PE/year

Applicable Compliance Method
Compliance with the annual emission limitation shall be demonstrated by multiplying the hourly emission limitation by a maximum operating schedule of 8760 hours per year and dividing by a conversion factor of 2000 lbs per ton.

t. Emission Limitation:
Visible PE shall not exceed 0% opacity as a six-minute average

Applicable Compliance Method
If required, compliance shall be determined in accordance with the test method and procedures in Method 9 of 40 CFR Part 60, Appendix A.

2. Formulation data or U.S. EPA Method 24 shall be used to determine the OC/VOC contents of all the coatings and cleanup materials.

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P006 - L-4 High Speed Horizontal Lamp Assembly Line (Line J) - Coating, End Brushing, Natural Gas Combustion, Bulb Crushing System with Baghouse and Mercury Evacuation with Cyclone and Carbon Adsorber (Chapter 31 modification to PTI 03-13538, issued 5/8/03 to include bulb crushing system).	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None