OhioEPA

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

05/29/03

RE: Proposed Title V Chapter 3745-77 Permit

03-17-01-0010
GE Lighting Inc - Bucyrus Lamp Plant

Attn: Genevieve Damico AR-18J
United States Environmental Protection Agency
Region V
77 West Jackson Blvd.
Chicago, IL 60604-3590

Dear Ms. Damico:

The proposed issuance of the Title V permit for GE Lighting Inc - Bucyrus Lamp Plant, has been created in Ohio EPA's State Air Resources System (STARS) on 05/29/03, for review by USEPA. This proposed action is identified in STARS as 3-Title V Proposed Permit T+C covering the facility specific terms and conditions, and Title V Proposed Permit covering the general terms and conditions. This proposed permit will be processed for issuance as a final action after forty-five (45) days from USEPA's receipt of this certified letter if USEPA does not object to the proposed permit. Please contact me at (614) 644-3631 by the end of the forty-five (45) day review period if you wish to object to the proposed permit.

Very truly yours,

Michael W. Ahern

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

cc: Northwest District Office
File, DAPC PMU

State of Ohio Environmental Protection Agency

PROPOSED TITLE V PERMIT

Issue Date: 05/29/03	Effective Date: To be entered upon final issuance	Expiration Date: To be entered upon final issuance

This document constitutes issuance of a Title V permit for Facility ID: 03-17-01-0010 to:
GE Lighting Inc - Bucyrus Lamp Plant
347 North Dunbridge Road
Bowling Green, OH 43402

Emissions Unit ID (Company ID)/Emissions Unit Activity Description

F001 (BR-2)
Crushed Bulb Silo and Truck Loading

K002 (BC-3)
Ecolux Base Coating Machine

P001 (C-1A)
Coater 1

P006 (L-4)
High Speed Horizontal (HSH) Lamp Assembly Line J

P007 (L-5)
High Speed Horizontal (HSH) Lamp Assembly Line K

P008 (L-6)
High Speed Horizontal (HSH) Lamp Assembly Line L

P013 (C-2A)
East Spray Lehr

P014 (C-5)
L2 Spray Lehr - Sn Chloride application

P015 (C-4)
L2 Spray Lehr - Natural gas fired oven

P016 (C-1B)
Coater 2

P017 (C-1C)
Coater 3

P018 (L-1,L-2)
Vertical lamp assembly line with Lehr Group 4

P019 (L-1,L-2)
Vertical lamp assembly line with Lehr Group 7

P020 (L-1, L-3)
Medium speed Horizontal (MSH) lamp assembly line with Lehr Group H

P021 (L-1, L-3)
Medium speed Horizontal (MSH) lamp assembly line with Lehr Group I

P022 (C-2B)
West Spray Lehr

P033 (BR-1)
Bulb Crushing System

R001 (MX-1)
Varnish Mix Tank and planetary mixer

You will be contacted approximately eighteen (18) months prior to the expiration date regarding the renewal of this permit. If you are not contacted, please contact the appropriate Ohio EPA District Office or local air agency listed below. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, provided that a complete renewal application is submitted no earlier than eighteen (18) months and no later than one-hundred eighty (180) days prior to the expiration date.

Described below is the current Ohio EPA District Office or local air agency that is responsible for processing and administering your Title V permit:

Northwest District Office
(419) 352-8461

OHIO ENVIRONMENTAL PROTECTION AGENCY

Christopher Jones
Director

PART I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Section

1. Monitoring and Related Record Keeping 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.
(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))

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 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.
(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))

c. The permittee shall submit required reports in the following manner:

i. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
(Authority for term: OAC rule 3745-77-07(A)(3)(c))

ii. **All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) with respect to emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:**

(a) Written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations ; (ii) the probable cause of such deviations; and (iii) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Part III of this Title V permit, 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. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. These written reports shall satisfy the

requirements (in part) of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the submission of monitoring reports every six months and the requirements (in part) of OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of all deviations. See B.6 below if no deviations occurred during the quarter.
(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) ,(ii) and (iii))

(b) Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the deviation reporting requirements for this Title V permit, written reports that identify each malfunction that occurred during each calendar quarter shall be submitted, at a minimum, quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year, and shall cover the previous calendar quarters.

In identifying each deviation caused by a malfunction, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Also, if a deviation caused by a malfunction is identified in a written report submitted pursuant to paragraph (a) above, a separate report is not required for that malfunction pursuant to this paragraph. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing, at a minimum, on a quarterly basis.

Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation, operational restriction, and control device operating parameter limitation shall be reported in the same manner as described above for malfunctions. These written reports for malfunctions (and scheduled maintenance projects, if appropriate) shall satisfy the requirements (in part) of OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of all deviations.
(Authority for term: OAC rules 3745-77-07(A)(3)(c)(iii))

iii. **For monitoring, record keeping, and reporting requirements:**
Written reports that identify any deviations from the federally enforceable monitoring, record keeping, 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. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. These semi-annual written reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the reporting of any deviations related to the monitoring, record

keeping, and reporting requirements. 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.
(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii))

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 (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete."
(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))

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 of any emissions unit(s) 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. Except as provided in OAC rule 3745-15-06, 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 emissions unit(s) that is (are) served by such control system(s).
(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iii))

3. Risk Management Plans

If applicable, the permittee shall 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"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

a. a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or

b. as part of the compliance certification submitted under 40 C.F.R. 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 C.F.R. Part 68 and OAC Chapter 3745-104, including the registration and submission of the risk management plan.

(Authority for term: OAC rule 3745-77-07(A)(4))

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.
(Authority for term: OAC rule 3745-77-07(A)(5))

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.
(Authority for term: OAC rule 3745-77-07(A)(6))

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, in accordance with A.10 below. 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.

(Authority for term: OAC rule 3745-77-07(A)(7))

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.
(Authority for term: OAC rule 3745-77-07(A)(8))

8. Marketable Permit Programs

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.
(Authority for term: OAC rule 3745-77-07(A)(9))

9. Reasonably Anticipated Operating Scenarios

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one

operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these general terms and conditions shall apply to all operating scenarios authorized in this permit.
(Authority for term: OAC rule 3745-77-07(A)(10))

10. Reopening for Cause

This Title V permit will be reopened prior to its expiration date under the following conditions:

a. Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.

b. This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.

c. The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.

d. The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))

11. 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.
(Authority for term: OAC rule 3745-77-07(B))

12. Compliance Requirements

a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V 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 paragraph (E) of OAC rule 3745-77-03.
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.

d. Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:

i. Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.
ii. Compliance certifications shall include the following:
    (a) An identification of each term or condition of this permit that is the basis of the certification.
    (b) The permittee's current compliance status.
    (c) Whether compliance was continuous or intermittent.
    (d) The method(s) used for determining the compliance status of the source currently and over the required reporting period.
    (e) Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
iii. Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

(Authority for term: OAC rules 3745-77-07(C)(1),(2),(4) and (5) and ORC section 3704.03(L))

13. Permit Shield

a. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.

b. This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

(Authority for term: OAC rule 3745-77-07(F))

14. Operational Flexibility

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the appropriate Ohio EPA District Office or local air agency with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the appropriate District Office of the Ohio EPA or local air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

(Authority for term: OAC rules 3745-77-07(H)(1) and (2))

15. Emergencies

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met. This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.

(Authority for term: OAC rule 3745-77-07(G))

16. Off-Permit Changes

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

a. The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.

b. The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emission levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.

c. The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).

d. The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e. The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit to install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.

(For purposes of clarification, the permittee can refer to Engineering Guide #63 that is available in the STARSHIP software package.) *(Authority for term: OAC rule 3745-77-07(I))*

17. Compliance Method Requirements

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding.
(This term is provided for informational purposes only.)

18. Insignificant Activities

Each insignificant activity that has one or more applicable requirements shall comply with those applicable requirements.
(Authority for term: OAC rule 3745-77-07(A)(1))

19. Permit to Install Requirement

Prior to the "installation" or "modification" of any "air contaminant source," as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.
(Authority for term: OAC rule 3745-77-07(A)(1))

20. 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.
(Authority for term: OAC rule 3745-77-07(A)(1))

B. *State Only Enforceable Section*

1. Reporting Requirements Related to Monitoring and Record Keeping Requirements

The permittee shall submit required reports in the following manner:

a. Reports of any required monitoring and/or record keeping 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 (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) 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. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. 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.)

2. Records Retention Requirements

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.

3. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. 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 verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

4. 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 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. 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 emissions unit(s) that is (are) served by such control system(s).

5. 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.

6. 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.

Part II - Specific Facility Terms and Conditions

A. State and Federally Enforcable Section

None

B. State Only Enforceable Section

1. The following insignificant emissions units are located at this facility:

York-Shipley N.G. Boilers # 1,2,3,4,5, Ohio EPA emissions unit B001;
York Shipley N.G. Boilers # 6,7,8,9, Ohio EPA emissions unit B002;
Cleaver Brooks N.G. Boiler # 1, Ohio EPA emissions unit B003;
Coating Mix Room, Ohio EPA emissions unit P010;
Base Cement Mixing, Ohio EPA emissions unit P011;
Base Fill Machines, Ohio EPA emissions unit P023;
Mercury Cleaning Hoods, Ohio EPA emissions unit P026;
Solvent Shop Degreaser # 1, Ohio EPA emissions unit P027;
Solvent Shop Degreaser # 2, Ohio EPA emissions unit P028;
Solvent Shop Degreaser # 3, Ohio EPA emissions unit P029;
Solvent Shop Degreaser # 4, Ohio EPA emissions unit P030;
Parking Lot Fugitive Dust, Ohio EPA emissions unit P031; and
Automatic Twin Packing Machine, Ohio EPA emissions unit P032.

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within a Permit to Install for the emissions unit.

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: BR-2 (F001)

Activity Description: Crushed Bulb Silo and Truck Loading

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
crushed bulb silo and truck loading	OAC rule 3745-17-07(B)	none (See A.I.2.a.)
	OAC rule 3745-17-08(B)	none (See A.I.2.b.)

2. Additional Terms and Conditions

2.a This emissions unit is exempt from the visible emissions limitation specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).

2.b This facility is not located within the areas identified in "Appendix A" of OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).

2.c Sections A.I.2.a and b above are intended for clarification of current regulatory applicability under this permit at time of issuance, and are not intended to address or prohibit any change that could otherwise be processed under OAC rule 3745-77-07(I).

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

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

2. Additional Terms and Conditions

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: BC-3 (K002)

Activity Description: Ecolux Base Coating Machine

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
'Ecolux' base coating machine	OAC rule 3745-21-09(U)(1)(c)	3.5 lbs volatile organic compounds (VOC) per gallon of coating, excluding water and exempt solvents
	OAC rule 3745-31-05 (PTI 03-10446)	4.0 lbs VOC per hour (including cleanup materials) The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(U)(1)(c).

2. Additional Terms and Conditions

2.a The VOC limitation of 4.0 lbs/hr is established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and reporting requirements to ensure compliance with this limit.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information each month for the line:

a. The name and identification number of each coating, as applied.

b. The VOC content of each coating, in lbs/gallon (excluding water and exempt solvents), as applied.

(This information does not have to be kept on a line-by-line basis, unless one or more of the lines is a new emissions unit and subject to specific "gallons/year" and "tons/year" limitations, or just a "tons/year" limitation in a Permit to Install. In such cases, for each such new emissions unit only, the above-mentioned information must be maintained separately for that line. Also, if the permittee mixes complying coatings at a line, it is not necessary to record the VOC content of the resulting mixture.)

IV. Reporting Requirements

1. The permittee shall notify the Director (the Ohio EPA, Northwest District Office) in writing of any monthly record showing the use of noncomplying coatings (i.e., for VOC content). The notification shall include a copy of such record and shall be sent to the Director (the Ohio EPA, Northwest District Office) within 30 days following the end of the calendar month.

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):

1.a VOC Content Limitation:
3.5 lbs VOC per gallon of coating, excluding water and exempt solvents

Applicable Compliance Method:
The permittee shall demonstrate compliance with the VOC content limitation above through the record keeping requirements established in Section A.III.1 of this permit.

1.b Emission Limitation:
4.0 lbs VOC per hour (including cleanup materials)

Applicable Compliance Method:
The permittee may determine compliance with the hourly allowable VOC emission limitation above as follows:

i. multiply the maximum VOC content of all the coatings employed (lbs/gallon) by the maximum coatings usage rate (gallons/hr);

ii. multiply the maximum VOC content of all the cleanup materials employed (lbs/gallon) by the maximum cleanup materials usage rate (gallons/hr); and

iii. add A.V.1.b.i + A.V.1.b.ii.

If required, the permittee shall demonstrate compliance with the hourly allowable VOC emission limitation in accordance with Methods 1 - 4, 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

2. Formulation data or USEPA Method 24 shall be used to determine the VOC contents of all the coatings and cleanup materials.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
'Ecolux' base coating machine	none	none

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

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

Pollutant: ethanol

TLV (ug/m3): 1,880,000

Maximum Hourly Emission Rate (lbs/hr): 1.67

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3221

MAGLC (ug/m3): 44,760

III. Monitoring and/or Record Keeping Requirements (continued)

2. 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 still 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 (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.

3. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that a 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.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: C-1A (P001)

Activity Description: Coater 1

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
phosphor coating - coater 1	OAC rule 3745-21-07(G)	none (See A.I.2.a.)
	OAC rule 3745-17-11(B)(2)	none (See A.I.2.b.)
	OAC rule 3745-17-07(A)	none (See A.I.2.c.)

2. Additional Terms and Conditions

2.a This facility is not located in a "Priority I" county (it is located in Crawford County) as indicated in paragraph (A) of OAC rule 3745-21-06, and is not a "new source" as defined in OAC 3745-15-01(R). Therefore, pursuant to OAC rule 3745-21-07(A), it is exempt from the requirements of OAC rule 3745-21-07(G).

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 because 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 emissions 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 Sections A.I.2.a, b and c above are intended for clarification of current regulatory applicability under this permit at time of issuance, and are not intended to address or prohibit any change that could otherwise be processed under OAC rule 3745-77-07(I).

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

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

2. Additional Terms and Conditions

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: L-4 (P006)

Activity Description: High Speed Horizontal (HSH) Lamp Assembly Line J

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
L-4 high speed horizontal lamp assembly line (line J) - coating, end brushing, natural gas combustion, and mercury evacuation with fabric filter and carbon adsorber	OAC rule 3745-31-05 (A)(3) PTI 03-13538	Coating Emissions: 8.15 lbs organic compounds (OC)/hour (see A.I.2.a) 35.70 tons OC/year Cleanup Emissions: 2.82 lbs OC/month 0.02 ton OC/year Natural Gas Combustion Emissions: 3.37 lbs nitrogen oxides (NOx)/hour 14.76 tons NOx/year 2.83 lbs carbon monoxide (CO)/hour 12.40 tons CO/year Binder Combustion Emissions: 0.05 lb NOx/hour 0.22 ton NOx/year End Brushing Emissions: 0.008 lb PE/hour 0.04 ton PE/year Visible particulate emissions (PE) shall not exceed 5% opacity, as a six-minute average. SO2 Lubricant Emissions:

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
		SO2 Lubricant Emissions: 0.84 lb SO2/hour 3.68 tons SO2/year Mercury Evacuation System Emissions: 0.0004 lb of Mercury (Hg)/hour 0.002 ton of Hg/year See A.I.2.g. The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-09(U)(1), 3745-21-07(G)(2), 3745-18-06(E), 3745-21-08(B) and 3745-23-06(B).
	OAC rule 3745-21-09(U)(1)(c)	on the days when coating metal parts: 3.5 pounds of volatile organic compounds (VOC) per gallon of coating, excluding water and exempt solvents [for the coatings used for the 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 (for the coatings used for only the non-metal parts) (see A.I.2.e).
	OAC rule 3745-23-06(B)	See A.I.2.f.
	OAC rule 3745-21-08(B)	See A.I.2.h.

2. Additional Terms and Conditions

2.a This emissions unit is subject to the emission limitation of 8.15 lbs of OC/hour, from the coating operations, at all times, except 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 because 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. Additional Terms and Conditions (continued)

2.e This emissions unit becomes subject to the OC emission limitations of 8 lbs/hr and 40 lbs/day [established persuant to OAC rule 3745-21-07 (G)(2)] on the days any photochemically reactive material (coating and/or cleanup material) is employed 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) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05 (A) (3) in Permit to Install 03-13538.

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%, by weight.

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 pound of mercury per hour.

2.h The permittee has satisfied 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 Permit to Install 03-13538.

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.i The hourly and annual emission limitations for NOx, CO, PE, SO2 and Hg were established for PTI purposes to reflect the potentials to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and reporting requirements to ensure compliance with these limitations.

2.j The hourly OC emission limitation of 8.15 pounds was established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and reporting requirements to ensure compliance with this limitation.

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 baghouse shall be maintained within the range of 0.50 - 5.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records of the following information for this emissions unit:

a. the company name and identification number of each coating/ink applied to non-metal substrates;

b. the company name and identification number of each cleanup material employed; and

c. whether or not each coating/ink and cleanup material employed is a photochemically reactive material.

III. Monitoring and/or Record Keeping Requirements (continued)

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

a. the company name and identification of the following:

i. each coating and ink employed on non-metal substrates; and

ii. each photochemically reactive cleanup material employed;

b. the total number of lamps processed;

c. the OC emissions from all the coatings and inks employed on non-metal substrates, calculated in accordance with the following equation:

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

where:

A = emission factor for surfactant phosphor coating:
maximum lb of coating/1000 lamps (0.358) x maximum OC content weight fraction (0.83) = 0.297 lb of OC/1000 lamps

B = emission factor for mono-ethanol amine phosphor coating:
maximum lb of coating/1000 lamps (0.181) x maximum OC content weight fraction (1.0) = 0.181 lb of OC/1000 lamps

C = emission factor for monogram ink:
maximum lb of ink/1000 lamps (0.006) x maximum OC content weight fraction (0.30) = 0.0018 lb of OC/1000 lamps

D = emission factor for monogram ink diluent solvent:
maximum lb of ink/1000 lamps (0.0002) x maximum OC content weight fraction (1.0) = 0.0002 lb of OC/1000 lamps

E = emission factor for headmarking ink:
maximum lb of ink/1000 lamps (0.0063) x maximum OC content weight fraction (0.71) = 0.0047 lb of OC/1000 lamps

F = emission factor for headmarking ink diluent solvent:
maximum lb of solvent/1000 lamps (0.0037) x maximum OC content weight fraction (1.0) = 0.0037 lb of OC/1000 lamps

G = emission factor for E-Mix:
maximum lb of E-Mix/1000 lamps (0.1607) x maximum OC content weight fraction (0.29) = 0.047 lb of OC/1000 lamps

III. Monitoring and/or Record Keeping Requirements (continued)

H = emission factor for E-Mix diluent solvent:
maximum lb of solvent/1000 lamps (0.0068) x maximum OC content weight fraction (1.00) = 0.0068 lb of OC/1000 lamps

I = emission factor for Dry-Film:
maximum lb of Dry-Film/1000 lamps (0.0339) x maximum weight fraction (.50) = 0.017 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), in pounds;

g. the total OC emissions from all the photochemically reactive cleanup materials employed (summation of A.III.2.f for all photochemically reactive cleanup materials), in pounds;

h. the total number of hours the emissions unit was in operation while coating non-metal substrates and employing photochemically reactive cleanup materials;

i. the total OC emissions from all the coatings/inks and photochemically reactive cleanup materials employed [(A.III.2.c + A.III.2.g)/A.III.2.h.)], in pounds; and

j. the average hourly OC emission rate (A.III.2.i/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" is based upon OAC rule 3745-21-01(C)(5).]

3. On the days when coating metal parts, the permittee shall collect and record the following information for this emissions unit for the coatings used for the metal parts:

a. the company name and identification of each coating (base cement) employed;

b. the VOC content of each coating (pounds/gallon, excluding water and exempt solvents) employed. [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 CVOC,2.]

III. Monitoring and/or Record Keeping Requirements (continued)

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 (including OC emissions from the use of photochemically reactive materials, non-photochemically reactive materials, and base cement) from lamp processing for this emissions unit:

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

b. the total number of lamps processed;

c. the total number of bases cemented;

d. the total OC emissions from the coatings and inks employed, calculated in accordance with the following equation:

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

* For emission factors A, B, C, D, E, F, G and H, see section A.III.2.

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

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

where

EF = emission factor for base cement:

EF (lb OC/1000 bases) = maximum lbs cement/1000 bases (5.055) x maximum OC content weight fraction (0.0774) x 0.98* = 0.383

*2% of the OC is retained in the base cement

5. The permittee shall collect and record the following information each month for all the 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 the cleanup materials employed (summation of A.III.5.d for all cleanup materials), in pounds.

6. The permittee shall calculate and record each month the total OC emissions for this emissions unit, in tons, calculated as follows:

total OC emissions (tons/month) = [the total OC emissions from lamp processing (from section A.III.4.d) + the total OC emissions from base cementing (from section A.III.4.e) + the total OC emissions from cleanup materials usage (from section A.III.5.e)]/2000

7. The permittee shall collect and record each year the total OC emissions for this emissions unit, in tons, calculated by summing the monthly OC emissions (from section A.III.6) for the calendar year.

III. Monitoring and/or Record Keeping Requirements (continued)

8. The permittee shall operate and maintain a continuous monitor which measures and records the pressure drop for the carbon adsorber serving the 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 the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.

9. The permittee shall properly 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 notify the Northwest District Office in writing of any daily 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. The deviation reports shall be submitted in accordance with paragraph A.1.c of the General 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 baghouse did not comply with the allowable range specified in section A.II.2 of the terms and conditions of this permit. The deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

4. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the following limitations:

a. the hourly and daily OC emission limitations of 8 and 40 pounds, respectively (on any day any PRM was employed while coating non-metal substrates); and

b. the monthly OC emission limitation of 2.82 pounds (from cleanup materials).

The deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

5. The permittee shall submit annual reports that summarize the actual annual OC emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

6. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.

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:

V. Testing Requirements (continued)

1.a Emission Limitation:
8.15 lbs OC/hour

Applicable Compliance Method:
The hourly allowable OC emission rate was established based on the summation of the OC emissions generated during lamp manufacturing and OC 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 mono ethanol amine 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 retained in the base cement).

If required, the permittee shall demonstrate compliance in accordance with Methods 1 - 4, 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

1.b Emission Limitation:
35.70 tons OC/year

Applicable Compliance Method:
Compliance with the OC emission limitation above shall be demonstrated based on the monitoring and record keeping requirements established in section A.III of this permit.

1.c Emission Limitation:
2.82 lbs OC/month, from cleanup materials

Applicable Compliance Method:
Compliance with the OC emission limitation above shall be demonstrated based on the monitoring and record keeping requirements established in section A.III.5 of this permit.

1.d Emission Limitation:
0.02 ton OC/year, from cleanup materials

Applicable Compliance Method:
Compliance with the OC emission limitation above shall be demonstrated based on the monitoring and record keeping requirements established in section A.III.5 of this permit and shall be the summation of the 12 OC emission rates for the calender year .

V. Testing Requirements (continued)

1.e Emission Limitation:
3.37 lbs NOx/hour (natural gas combustion)

Applicable Compliance Method:

The hourly allowable NOx emission limitation was established by multiplying the maximum natural gas usage rate of 33,675 cu. ft /hr by the AP-42 emission factor of 100 lbs of NOx/mm cu. ft (AP-42, Section 1.4, Table 1.4-1 [revised 7/98]).

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

1.f Emission Limitation:
2.83 lb CO/hour (natural gas combustion)

Applicable Compliance Method:

The hourly allowable CO emission limitation was established by multiplying the maximum natural gas usage rate of 33,675 cu. ft /hr by the AP-42 emission factor of 84 lbs of CO/mm cu. ft (AP-42, Section 1.4, Table 1.4-1 [revised 7/98]).

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

1.g Emission Limitation:
0.008 lb PE/hour (end brushing)

Applicable Compliance Method:
The hourly allowable PE limitation was established by multiplying the maximum phosphor coating application rate of 12.56 lbs/1000 lamps by the maximum end brushing rate of 60 lamps per hour, and then multiplying by a control factor (1-0.99*).

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

* the baghouse control efficiency is assumed to be 99%

1.h 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.

1.i Emission Limitation:
0.84 lb SO2/hour (SO2 lubricant)

Applicable Compliance Method:
The hourly allowable SO2 emission limitation was established by summing the maximum of 0.11 lb of SO2/hour injected in the Lehr and 0.73 lb of SO2/hour injected in the flare machines.

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

V. Testing Requirements (continued)

1.j Emission Limitation:
0.05 lb NOx/hour (binder combustion)

Applicable Compliance Method:
The hourly allowable SO2 emission limitation was established by multiplying the maximum phosphor coating application rate of 12.56 lbs/1000 lamps by the maximum lamp processing rate of 6000 lamps per hour and by 0.11 lb of binder/lb of coating, and then by 0.0055 lb of NOx/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.

1.k Emission Limitation:
0.0004 lb Hg/hour

Applicable Compliance Method:

Compliance shall be determined based on the results of emission testing conducted in accordance with Method 29 of 40 CFR, Part 60, Appendix A.

1.l Emission Limitations:
14.76 tons NOx/year (natural gas combustion)
12.40 tons CO/year (natural gas combustion)
0.04 ton PE/year (end brushing)
3.68 tons SO2/year (SO2 lubricant)
0.22 ton NOx/year (binder combustion)
0.002 ton Hg/year

Applicable Compliance Method:
Compliance with the annual emission limitation for each pollutant above shall be assumed as long as compliance with the hourly emission limitation for the specific pollutant is maintained (the annual emission limitation for each pollutant was determined by multiplying the hourly emission limitation for the specific pollutant by 8760, and then dividing by 2000).

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.

3. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 12 months following the issuance of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for Hg.

c. The following test method shall be employed to demonstrate compliance with the allowable mass emission rate: Method 29, 40 CFR, Part 60, Appendix A.*

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

This emission testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency, and the testing shall be conducted shortly before the carbon adsorption canister has been replaced.

d. The test(s) shall be conducted while the emissions unit and the carbon adsorption canister* are operating at or near their maximum capacities, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency .

V. Testing Requirements (continued)

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

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

2. Additional Terms and Conditions

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: L-5 (P007)

Activity Description: High Speed Horizontal (HSH) Lamp Assembly Line K

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
L-5 high speed horizontal lamp assembly line (line k) - coating, end brushing, natural gas combustion, and mercury evacuation with fabric filter and carbon adsorber	OAC rule 3745-31-05 (A)(3) PTI 03-13538	Coating Emissions: 8.36 lbs organic compounds (OC)/hour (see A.I.2.a) 35.62 tons OC/year Cleanup Emissions: 2.82 lbs OC/month 0.02 ton OC/year Natural Gas Combustion Emissions: 3.33 lbs nitrogen oxides (NOx)/hour 14.59 tons NOx/year 2.80 lbs carbon monoxide (CO)/hour 12.26 tons CO/year Binder Combustion Emissions: 0.25 lb NOx/hour 1.10 tons NOx/year End Brushing Emissions: 0.009 lb PE/hour 0.04 ton PE/year Visible particulate emissions (PE) shall not exceed 5% opacity, as a six-minute average. SO2 Lubricant Emissions:

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
		SO2 Lubricant Emissions: 0.84 lb SO2/hour 3.68 tons SO2/year Mercury Evacuation System Emissions: 0.0004 lb of Mercury (Hg)/hour 0.002 ton of Hg/year See A.I.2.g. The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-09(U)(1), 3745-21-07(G)(2), 3745-18-06(E), 3745-21-08(B) and 3745-23-06(B).
	OAC rule 3745-21-09(U)(1)(c)	on the days when coating metal parts: 3.5 pounds of volatile organic compounds (VOC) per gallon of coating, excluding water and exempt solvents [for the coatings used for the 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 (for the coatings used for only the non-metal parts) (see A.I.2.e).
	OAC rule 3745-23-06(B)	See A.I.2.f.
	OAC rule 3745-21-08(B)	See A.I.2.h.

2. Additional Terms and Conditions

2.a This emissions unit is subject to the emission limitation of 8.36 lbs of OC/hour, from the coating operations, at all times, except 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 because 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. Additional Terms and Conditions (continued)

2.e This emissions unit becomes subject to the OC emission limitations of 8 lbs/hr and 40 lbs/day [established persuant to OAC rule 3745-21-07 (G)(2)] on the days any photochemically reactive material (coating and/or cleanup material) is employed 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) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05 (A) (3) in Permit to Install 03-13538.

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%, by weight.

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 pound of mercury per hour.

2.h The permittee has satisfied 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 Permit to Install 03-13538.

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.i The hourly and annual emission limitations for NOx, CO, PE, SO2 and Hg were established for PTI purposes to reflect the potentials to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and reporting requirements to ensure compliance with these limitations.

2.j The hourly OC emission limitation of 8.36 pounds was established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and reporting requirements to ensure compliance with this limitation.

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 baghouse shall be maintained within the range of 0.50 - 5.0 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records of the following information for this emissions unit:

a. the company name and identification number of each coating/ink applied to non-metal substrates;

b. the company name and identification number of each cleanup material employed; and

c. whether or not each coating/ink and cleanup material employed is a photochemically reactive material.

III. Monitoring and/or Record Keeping Requirements (continued)

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

a. the company name and identification of the following:

i. each coating and ink employed on non-metal substrates; and

ii. each photochemically reactive cleanup material employed;

b. the total number of lamps processed;

c. the OC emissions from all the coatings and inks employed on non-metal substrates, calculated in accordance with the following equation:

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

where:

A = emission factor for surfactant phosphor coating:
maximum lb of coating/1000 lamps (0.358) x maximum OC content weight fraction (0.83) = 0.297 lb of OC/1000 lamps

B = emission factor for mono-ethanol amine phosphor coating:
maximum lb of coating/1000 lamps (0.181) x maximum OC content weight fraction (1.0) = 0.181 lb of OC/1000 lamps

C = emission factor for monogram ink:
maximum lb of ink/1000 lamps (0.006) x maximum OC content weight fraction (0.30) = 0.0018 lb of OC/1000 lamps

D = emission factor for monogram ink diluent solvent:
maximum lb of ink/1000 lamps (0.0002) x maximum OC content weight fraction (1.0) = 0.0002 lb of OC/1000 lamps

E = emission factor for headmarking ink:
maximum lb of ink/1000 lamps (0.0063) x maximum OC content weight fraction (0.71) = 0.0047 lb of OC/1000 lamps

F = emission factor for headmarking ink diluent solvent:
maximum lb of solvent/1000 lamps (0.0037) x maximum OC content weight fraction (1.0) = 0.0037 lb of OC/1000 lamps

G = emission factor for E-Mix:
maximum lb of E-Mix/1000 lamps (0.1607) x maximum OC content weight fraction (0.29) = 0.047 lb of OC/1000 lamps

III. Monitoring and/or Record Keeping Requirements (continued)

H = emission factor for E-Mix diluent solvent:
maximum lb of solvent/1000 lamps (0.0068) x maximum OC content weight fraction (1.00) = 0.0068 lb of OC/1000 lamps

I = emission factor for Dry-Film:
maximum lb of Dry-Film/1000 lamps (0.0339) x maximum OC content weight fraction (.50) = 0.017 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), in pounds;

g. the total OC emissions from all the photochemically reactive cleanup materials employed (summation of A.III.2.f for all photochemically reactive cleanup materials), in pounds;

h. the total number of hours the emissions unit was in operation while coating non-metal substrates and employing photochemically reactive cleanup materials;

i. the total OC emissions from all the coatings/inks and photochemically reactive cleanup materials employed [(A.III.2.c + A.III.2.g)/A.III.2.h.)], in pounds; and

j. the average hourly OC emission rate (A.III.2.i/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" is based upon OAC rule 3745-21-01(C)(5).]

3. On the days when coating metal parts, the permittee shall collect and record the following information for this emissions unit for the coatings used for the metal parts:

a. the company name and identification of each coating (base cement) employed;

b. the VOC content of each coating (pounds/gallon, excluding water and exempt solvents) employed. [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 CVOC,2.]

III. Monitoring and/or Record Keeping Requirements (continued)

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 (including OC emissions from the use of photochemically reactive materials, non-photochemically reactive materials, and base cement) from lamp processing for this emissions unit:

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

b. the total number of lamps processed;

c. the total number of bases cemented;

d. the total OC emissions from the coatings and inks employed, calculated in accordance with the following equation:

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

* For emission factors A, B, C, D, E, F, G and H, see section A.III.2.

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

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

where

EF = emission factor for base cement:

EF (lb OC/1000 bases) = maximum lbs cement/1000 bases (5.055) x maximum OC content weight fraction (0.0774) x 0.98* = 0.383

*2% of the OC is retained in the base cement

5. The permittee shall collect and record the following information each month for all the 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 the cleanup materials employed (summation of A.III.5.d for all cleanup materials), in pounds.

6. The permittee shall calculate and record each month the total OC emissions for this emissions unit, in tons, calculated as follows:

total OC emissions (tons/month) = [the total OC emissions from lamp processing (from section A.III.4.d) + the total OC emissions from base cementing (from section A.III.4.e) + the total OC emissions from cleanup materials usage (from section A.III.5.e)]/2000

7. The permittee shall collect and record each year the total OC emissions for this emissions unit, in tons, calculated by summing the monthly OC emissions (from section A.III.6) for the calendar year.

III. Monitoring and/or Record Keeping Requirements (continued)

8. The permittee shall operate and maintain a continuous monitor which measures and records the pressure drop for the carbon adsorber serving the 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 the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.

9. The permittee shall properly 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 notify the Northwest District Office in writing of any daily 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. The deviation reports shall be submitted in accordance with paragraph A.1.c of the General 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 baghouse did not comply with the allowable range specified in section A.II.2 of the terms and conditions of this permit. The deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

4. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the following limitations:

a. the hourly and daily OC emission limitations of 8 and 40 pounds, respectively (on any day any PRM was employed while coating non-metal substrates); and

b. the monthly OC emission limitation of 2.82 pounds (from cleanup materials).

The deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

5. The permittee shall submit annual reports that summarize the actual annual OC emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

6. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.

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:

V. Testing Requirements (continued)

1.a Emission Limitation:
8.36 lbs OC/hour

Applicable Compliance Method:
The hourly allowable OC emission rate was established based on the summation of the OC emissions generated during lamp manufacturing and OC 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 2.19 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 7,500 lamps per hour:

Phosphor Coating - 1.58 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 mono ethanol amine 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 - 0.06 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 - 0.40 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 - 0.13 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 6.18 lbs of OC per hour based on a maximum lamp base cementing rate of 16,130 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 retained in the base cement).

If required, the permittee shall demonstrate compliance in accordance with Methods 1 - 4, 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

1.b Emission Limitation:
35.62 tons OC/year

Applicable Compliance Method:
Compliance with the OC emission limitation above shall be demonstrated based on the monitoring and record keeping requirements established in section A.III of this permit.

1.c Emission Limitation:
2.82 lbs OC/month, from cleanup materials

Applicable Compliance Method:
Compliance with the OC emission limitation above shall be demonstrated based on the monitoring and record keeping requirements established in section A.III.5 of this permit.

1.d Emission Limitation:
0.02 ton OC/year, from cleanup materials

Applicable Compliance Method:
Compliance with the OC emission limitation above shall be demonstrated based on the monitoring and record keeping requirements established in section A.III.5 of this permit and shall be the summation of the 12 OC emission rates for the calender year .

V. Testing Requirements (continued)

1.e Emission Limitation:
3.33 lbs NOx/hour (natural gas combustion)

Applicable Compliance Method:

The hourly allowable NOx emission limitation was established by multiplying the maximum natural gas usage rate of 33,315 cu. ft /hr by the AP-42 emission factor of 100 lbs of NOx/mm cu. ft (AP-42, Section 1.4, Table 1.4-1 [revised 7/98]).

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

1.f Emission Limitation:
2.80 lb CO/hour (natural gas combustion)

Applicable Compliance Method:

The hourly allowable CO emission limitation was established by multiplying the maximum natural gas usage rate of 33,315 cu. ft /hr by the AP-42 emission factor of 84 lbs of CO/mm cu. ft (AP-42, Section 1.4, Table 1.4-1 [revised 7/98]).

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

1.g Emission Limitation:
0.009 lb PE/hour (end brushing)

Applicable Compliance Method:
The hourly allowable PE limitation was established by multiplying the maximum phosphor coating application rate of 12.56 lbs/1000 lamps by the maximum end brushing rate of 75 lamps per hour, and then multiplying by a control factor (1-0.99*).

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

* the baghouse control efficiency is assumed to be 99%

1.h 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.

1.i Emission Limitation:
0.84 lb SO2/hour (SO2 lubricant)

Applicable Compliance Method:
The hourly allowable SO2 emission limitation was established by summing the maximum of 0.11 lb of SO2/hour injected in the Lehr and 0.73 lb of SO2/hour injected in the flare machines.

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

V. Testing Requirements (continued)

1.j Emission Limitation:
0.05 lb NOx/hour (binder combustion)

Applicable Compliance Method:
The hourly allowable SO2 emission limitation was established by multiplying the maximum phosphor coating application rate of 12.56 lbs/1000 lamps by the maximum lamp processing rate of 6000 lamps per hour and by 0.11 lb of binder/lb of coating, and then by 0.0055 lb of NOx/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.

1.k Emission Limitation:
0.0004 lb Hg/hour

Applicable Compliance Method:

Compliance shall be determined based on the results of emission testing conducted in accordance with Method 29 of 40 CFR, Part 60, Appendix A.

1.l Emission Limitations:
14.59 tons NOx/year (natural gas combustion)
12.26 tons CO/year (natural gas combustion)
0.04 ton PE/year (end brushing)
3.68 tons SO2/year (SO2 lubricant)
0.22 ton NOx/year (binder combustion)
0.002 ton Hg/year

Applicable Compliance Method:
Compliance with the annual emission limitation for each pollutant above shall be assumed as long as compliance with the hourly emission limitation for the specific pollutant is maintained (the annual emission limitation for each pollutant was determined by multiplying the hourly emission limitation for the specific pollutant by 8760, and then dividing by 2000).

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.

3. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 12 months following the issuance of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for Hg.

c. The following test method shall be employed to demonstrate compliance with the allowable mass emission rate: Method 29, 40 CFR, Part 60, Appendix A.*

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

This emission testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency, and the testing shall be conducted shortly before the carbon adsorption canister has been replaced.

d. The test(s) shall be conducted while the emissions unit and the carbon adsorption canister* are operating at or near their maximum capacities, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency .

V. Testing Requirements (continued)

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

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

2. Additional Terms and Conditions

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: L-6 (P008)

Activity Description: High Speed Horizontal (HSH) Lamp Assembly Line L

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
L-6 high speed horizontal lamp assembly line (line L) - coating, end brushing, natural gas combustion, and mercury evacuation with cyclone and carbon adsorber	OAC rule 3745-31-05 (A)(3) PTI 03-13538	Coating Emissions: 7.81 lbs organic compounds (OC)/hour (see A.I.2.a) 34.21 tons OC/year Cleanup Emissions: 2.82 lbs OC/month 0.02 ton OC/year Natural Gas Combustion Emissions: 3.36 lbs nitrogen oxides (NOx)/hour 14.72 tons NOx/year 2.83 lbs carbon monoxide (CO)/hour 12.40 tons CO/year Binder Combustion Emissions: 0.23 lb NOx/hour 1.01 tons NOx/year End Brushing Emissions: 0.18 lb PE/hour 0.79 ton PE/year Visible particulate emissions (PE) shall not exceed 5% opacity, as a six-minute average. SO2 Lubricant Emissions:

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
		SO2 Lubricant Emissions: 0.84 lb SO2/hour 3.68 tons SO2/year Mercury Evacuation System Emissions: 0.0004 lb of Mercury (Hg)/hour 0.002 ton of Hg/year See A.I.2.g. The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-09(U)(1), 3745-21-07(G)(2), 3745-18-06(E), 3745-21-08(B) and 3745-23-06(B).
	OAC rule 3745-21-09(U)(1)(c)	on the days when coating metal parts: 3.5 pounds of volatile organic compounds (VOC) per gallon of coating, excluding water and exempt solvents [for the coatings used for the 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 (for the coatings used for only the non-metal parts) (see A.I.2.e).
	OAC rule 3745-23-06(B)	See A.I.2.f.
	OAC rule 3745-21-08(B)	See A.I.2.h.

2. Additional Terms and Conditions

2.a This emissions unit is subject to the emission limitation of 7.81 lbs of OC/hour, from the coating operations, at all times, except 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 because 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. Additional Terms and Conditions (continued)

2.e This emissions unit becomes subject to the OC emission limitations of 8 lbs/hr and 40 lbs/day [established persuant to OAC rule 3745-21-07 (G)(2)] on the days any photochemically reactive material (coating and/or cleanup material) is employed 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) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05 (A) (3) in Permit to Install 03-13538.

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

i. Use of a cyclone for particulate emissions from the end brushing operation; the cyclone shall achieve an overall control efficiency of 80%, by weight.

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 pound of mercury per hour.

2.h The permittee has satisfied 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 Permit to Install 03-13538.

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.i The hourly and annual emission limitations for NOx, CO, PE, SO2 and Hg were established for PTI purposes to reflect the potentials to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and reporting requirements to ensure compliance with these limitations.

2.j The hourly OC emission limitation of 7.81 pounds was established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and reporting requirements to ensure compliance with this limitation.

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 cyclone shall be maintained ,while this emissions unit is in operation, within a range established in accordance with the manufacture's written recommendation or within a range established during the most recent emission testing that demonstrated that the emissions unit was in compliance.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records of the following information for this emissions unit:

a. the company name and identification number of each coating/ink applied to non-metal substrates;

b. the company name and identification number of each cleanup material employed; and

c. whether or not each coating/ink and cleanup material employed is a photochemically reactive material.

III. Monitoring and/or Record Keeping Requirements (continued)

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

a. the company name and identification of the following:

i. each coating and ink employed on non-metal substrates; and

ii. each photochemically reactive cleanup material employed;

b. the total number of lamps processed;

c. the OC emissions from all the coatings and inks employed on non-metal substrates, calculated in accordance with the following equation:

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

where:

A = emission factor for surfactant phosphor coating:
maximum lb of coating/1000 lamps (0.358) x maximum OC content weight fraction (0.83) = 0.297 lb of OC/1000 lamps

B = emission factor for mono-ethanol amine phosphor coating:
maximum lb of coating/1000 lamps (0.181) x maximum OC content weight fraction (1.0) = 0.181 lb of OC/1000 lamps

C = emission factor for monogram ink:
maximum lb of ink/1000 lamps (0.006) x maximum OC content weight fraction (0.30) = 0.0018 lb of OC/1000 lamps

D = emission factor for monogram ink diluent solvent:
maximum lb of ink/1000 lamps (0.0002) x maximum OC content weight fraction (1.0) = 0.0002 lb of OC/1000 lamps

E = emission factor for headmarking ink:
maximum lb of ink/1000 lamps (0.0063) x maximum OC content weight fraction (0.71) = 0.0047 lb of OC/1000 lamps

F = emission factor for headmarking ink diluent solvent:
maximum lb of solvent/1000 lamps (0.0037) x maximum OC content weight fraction (1.0) = 0.0037 lb of OC/1000 lamps

G = emission factor for E-Mix:
maximum lb of E-Mix/1000 lamps (0.1607) x maximum OC content weight fraction (0.29) = 0.047 lb of OC/1000 lamps

III. Monitoring and/or Record Keeping Requirements (continued)

H = emission factor for E-Mix diluent solvent:
maximum lb of solvent/1000 lamps (0.0068) x maximum OC content weight fraction (1.00) = 0.0068 lb of OC/1000 lamps

I = emission factor for Dry-Film:
maximum lb of Dry-Film/1000 lamps (0.0339) x maximum OC content weight fraction (.50) = 0.017 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), in pounds;

g. the total OC emissions from all the photochemically reactive cleanup materials employed (summation of A.III.2.f for all photochemically reactive cleanup materials), in pounds;

h. the total number of hours the emissions unit was in operation while coating non-metal substrates and employing photochemically reactive cleanup materials;

i. the total OC emissions from all the coatings/inks and photochemically reactive cleanup materials employed [(A.III.2.c + A.III.2.g)/A.III.2.h.)], in pounds; and

j. the average hourly OC emission rate (A.III.2.i/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" is based upon OAC rule 3745-21-01(C)(5).]

3. On the days when coating metal parts, the permittee shall collect and record the following information for this emissions unit for the coatings used for the metal parts:

a. the company name and identification of each coating (base cement) employed;

b. the VOC content of each coating (pounds/gallon, excluding water and exempt solvents) employed. [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 CVOC,2.]

III. Monitoring and/or Record Keeping Requirements (continued)

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 (including OC emissions from the use of photochemically reactive materials, non-photochemically reactive materials, and base cement) from lamp processing for this emissions unit:

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

b. the total number of lamps processed;

c. the total number of bases cemented;

d. the total OC emissions from the coatings and inks employed, calculated in accordance with the following equation:

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

* For emission factors A, B, C, D, E, F, G and H, see section A.III.2.

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

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

where

EF = emission factor for base cement:

EF (lb OC/1000 bases) = maximum lbs cement/1000 bases (5.055) x maximum OC content weight fraction (0.0774) x 0.98* = 0.383

*2% of the OC is retained in the base cement

5. The permittee shall collect and record the following information each month for all the 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 the cleanup materials employed (summation of A.III.5.d for all cleanup materials), in pounds.

6. The permittee shall calculate and record each month the total OC emissions for this emissions unit, in tons, calculated as follows:

total OC emissions (tons/month) = [the total OC emissions from lamp processing (from section A.III.4.d) + the total OC emissions from base cementing (from section A.III.4.e) + the total OC emissions from cleanup materials usage (from section A.III.5.e)]/2000

7. The permittee shall collect and record each year the total OC emissions for this emissions unit, in tons, calculated by summing the monthly OC emissions (from section A.III.6) for the calendar year.

III. Monitoring and/or Record Keeping Requirements (continued)

8. The permittee shall operate and maintain a continuous monitor which measures and records the pressure drop for the carbon adsorber serving the 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 the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.

9. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the cyclone 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 notify the Northwest District Office in writing of any daily 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. The deviation reports shall be submitted in accordance with paragraph A.1.c of the General 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 cyclone did not comply with the allowable range specified in section A.II.2 of the terms and conditions of this permit. The deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

4. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the following limitations:

a. the hourly and daily OC emission limitations of 8 and 40 pounds, respectively (on any day any PRM was employed while coating non-metal substrates); and

b. the monthly OC emission limitation of 2.82 pounds (from cleanup materials).

The deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

5. The permittee shall submit annual reports that summarize the actual annual OC emissions for this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

6. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.

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:

V. Testing Requirements (continued)

1.a Emission Limitation:
7.81 lbs OC/hour

Applicable Compliance Method:
The hourly allowable OC emission rate was established based on the summation of the OC emissions generated during lamp manufacturing and OC 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 2.04 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 7,000 lamps per hour:

Phosphor Coating - 1.48 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 mono ethanol amine 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 - 0.06 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 - 0.37 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 - 0.12 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 retained in the base cement).

If required, the permittee shall demonstrate compliance in accordance with Methods 1 - 4, 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

1.b Emission Limitation:
34.21 tons OC/year

Applicable Compliance Method:
Compliance with the OC emission limitation above shall be demonstrated based on the monitoring and record keeping requirements established in section A.III of this permit.

1.c Emission Limitation:
2.82 lbs OC/month, from cleanup materials

Applicable Compliance Method:
Compliance with the OC emission limitation above shall be demonstrated based on the monitoring and record keeping requirements established in section A.III.5 of this permit.

1.d Emission Limitation:
0.02 ton OC/year, from cleanup materials

Applicable Compliance Method:
Compliance with the OC emission limitation above shall be demonstrated based on the monitoring and record keeping requirements established in section A.III.5 of this permit and shall be the summation of the 12 OC emission rates for the calender year .

V. Testing Requirements (continued)

1.e Emission Limitation:
3.36 lbs NOx/hour (natural gas combustion)

Applicable Compliance Method:

The hourly allowable NOx emission limitation was established by multiplying the maximum natural gas usage rate of 33,637 cu. ft /hr by the AP-42 emission factor of 100 lbs of NOx/mm cu. ft (AP-42, Section 1.4, Table 1.4-1 [revised 7/98]).

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

1.f Emission Limitation:
2.83 lb CO/hour (natural gas combustion)

Applicable Compliance Method:

The hourly allowable CO emission limitation was established by multiplying the maximum natural gas usage rate of 33,637 cu. ft /hr by the AP-42 emission factor of 84 lbs of CO/mm cu. ft (AP-42, Section 1.4, Table 1.4-1 [revised 7/98]).

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

1.g Emission Limitation:
0.18 lb PE/hour (end brushing)

Applicable Compliance Method:
The hourly allowable PE limitation was established by multiplying the maximum phosphor coating application rate of 12.56 lbs/1000 lamps by the maximum end brushing rate of 70 lamps per hour, and then multiplying by a control factor (1-0.80*).

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

* the cyclone control efficiency is assumed to be 80%

1.h 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.

1.i Emission Limitation:
0.84 lb SO2/hour (SO2 lubricant)

Applicable Compliance Method:
The hourly allowable SO2 emission limitation was established by summing the maximum of 0.11 lb of SO2/hour injected in the Lehr and 0.73 lb of SO2/hour injected in the flare machines.

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

V. Testing Requirements (continued)

1.j Emission Limitation:
0.23 lb NOx/hour (binder combustion)

Applicable Compliance Method:
The hourly allowable SO2 emission limitation was established by multiplying the maximum phosphor coating application rate of 12.56 lbs/1000 lamps by the maximum lamp processing rate of 6000 lamps per hour and by 0.11 lb of binder/lb of coating, and then by 0.0238 lb of NOx/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.

1.k Emission Limitation:
0.0004 lb Hg/hour

Applicable Compliance Method:

Compliance shall be determined based on the results of emission testing conducted in accordance with Method 29 of 40 CFR, Part 60, Appendix A.

1.l Emission Limitations:
14.72 tons NOx/year (natural gas combustion)
12.40 tons CO/year (natural gas combustion)
0.79 ton PE/year (end brushing)
3.68 tons SO2/year (SO2 lubricant)
0.22 ton NOx/year (binder combustion)
0.002 ton Hg/year

Applicable Compliance Method:
Compliance with the annual emission limitation for each pollutant above shall be assumed as long as compliance with the hourly emission limitation for the specific pollutant is maintained (the annual emission limitation for each pollutant was determined by multiplying the hourly emission limitation for the specific pollutant by 8760, and then dividing by 2000).

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.

3. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 12 months following the issuance of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for Hg.

c. The following test method shall be employed to demonstrate compliance with the allowable mass emission rate: Method 29, 40 CFR, Part 60, Appendix A.*

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

This emission testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency, and the testing shall be conducted shortly before the carbon adsorption canister has been replaced.

d. The test(s) shall be conducted while the emissions unit and the carbon adsorption canister* are operating at or near their maximum capacities, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency .

V. Testing Requirements (continued)

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
L-6 high speed horizontal lamp assembly line (line L) - coating, end brushing, natural gas combustion, and mercury evacuation with cyclone and carbon adsorber	None	None

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

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

Pollutant: ethanol

TLV (mg/m3): 1884.25

Maximum Hourly Emission Rate (lbs/hr): 5.30

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 594.30

MAGLC (ug/m3): 44,761.0

Pollutant: mono ethanolamine

TLV (mg/m3): 7.49

Maximum Hourly Emission Rate (lbs/hr): 1.27

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 151.4

MAGLC (ug/m3): 178.44

III. Monitoring and/or Record Keeping Requirements (continued)

2. 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 still 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 (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.

3. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that a 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.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: C-2A (P013)

Activity Description: East Spray Lehr

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
east spray lehr (with tin chloride application) direct-fired natural gas, 13.6 mmBtu/hr, with settling chamber and 'venturi and packed tower' wet scrubber system	OAC rule 3745-31-05 (PTI 03-5922)	0.38 lb particulate emissions (PE)/hr, 1.66 tons/yr PE 1.20 lb carbon monoxide (CO)/hr, 5.25 tons/yr CO 1.43 lbs nitrogen oxides (NOx)/hr, 6.26 tons/yr NOx 0.91 lb volatile organic compounds (VOC) /hr, 3.99 tons/yr VOC 0.37 lb hydrogen chloride (HCl)/hr, 1.62 tons/yr HCl The requirements of this rule also include compliance with the requirements of OAC rules 3745-18-06(E), 3745-21-08(B) and 3745-23-06(B).
	OAC rule 3745-17-11(B)	none (See A.I.2.a.)
	OAC rule 3745-17-07(A)	none (See A.I.2.b.)
	OAC rule 3745-18-06(E)	Exempt, See A.I.2.c.
	OAC rule 3745-23-06(B)	See A.I.2.d.
	OAC rule 3745-21-08(B)	See A.I.2.d.

2. Additional Terms and Conditions

2.a 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 because the facility is located in Crawford County, which is identified as a P-2 county.

2.b This emissions unit is exempt from the visible emissions 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. Additional Terms and Conditions (continued)

2.c 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.d The permittee has satisfied the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06, respectively by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 03-5922.

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.e Sections A.I.2.a, b. and c above are intended for clarification of current regulatory applicability under this permit at time of issuance, and are not intended to address or prohibit any change that could otherwise be processed under OAC rule 3745-77-07(I).

II. Operational Restrictions

1. The pressure drop across the high energy venturi section of the scrubber system shall be maintained at a value of not less than 35 inches of water at all times while the emissions unit is in operation.

2. The water flow rate through the packed tower section of the scrubber system shall be maintained at a value of not less than 150 gallons per minute at all times while the emissions unit is in operation.

3. The pH of the scrubber water from the treatment tank shall be maintained within the range of 5.5 to 8.5 at all times while the emissions unit is in operation.

4. The permittee shall burn only natural gas, or other such 'inherently clean' fuel that would result in emissions that comply with the limitations and restrictions of this permit, in this emissions unit.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to continuously monitor the static pressure drop across the venturi section and water flow rate to the packed tower section while the emissions unit is in operation. The monitoring devices and any recorders shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals, or good engineering practice.

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

a. The pressure drop across the venturi section, in inches of water, on a daily basis.

b. The water flow rate to the packed tower section, in gallons per minute, on a daily basis.

2. The permittee shall properly operate and maintain equipment to continuously monitor the pH of the scrubber system treatment tank water while the emissions unit is in operation. The pH monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals, or good engineering practice.

The permittee shall collect and record the following information each day: the pH of the treatment tank water.

3. For each day during which the permittee burns a fuel other than natural gas or other inherently clean fuel, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at the required levels:

a. The static pressure drop across the venturi section.

b. The water flow rate for the packed tower section.

c. The pH of the scrubber system treatment tank water.

The deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

2. The permittee shall submit deviation (excursion) reports that identify each day when any fuel was burned in this emissions unit other than natural gas or other inherently clean fuel. Each report shall be submitted within 30 days after the deviation occurs.

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):

1.a Emission Limitation:
0.38 lb PE/hr

Applicable Compliance Method:
To determine the actual maximum PE rate (E), the permittee may use the following equation:

E = E1 + E2

E1 = 0.15 lb PE/hr (determined by multiplying the maximum hourly natural gas burning capacity of the emissions unit (mm cu. ft./hour) by the AP-42, Table 1.4-2 (revised 7/98) emission factor for natural gas (1.9 lbs PE/mm cu. ft))

E2 = 0.10 lb PE/hr (determined based on the results of emission testing conducted for emissions unit P009 in November, 1991)

If required, the permittee shall demonstrate compliance with the limitation above in accordance with 40 CFR, Part 60, Appendix A, Methods 1 - 5.

1.b Emission Limitation:
1.43 lbs NOx/hr

Applicable Compliance Method:
The permittee may demonstrate compliance with the hourly allowable NOx limitation by multiplying the maximum hourly gas burning capacity of the emissions unit (mm cu. ft./hour) by the AP-42, Table 1.4-1 (revised 7/98) emission factor for natural gas (100 lbs NOx/mm cu. ft).

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

1.c Emission Limitation:
1.20 lb CO/hr

Applicable Compliance Method:
The permittee may demonstrate compliance with the hourly allowable CO limitation by multiplying the maximum hourly gas burning capacity of the emissions unit (mm cu. ft./hour) by the AP-42, Table 1.4-1 (revised 7/98) emission factor for natural gas (84 lbs CO/mm cu. ft).

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.

V. Testing Requirements (continued)

1.d Emission Limitation:
0.91 lb VOC/hr

Applicable Compliance Method:
The permittee may demonstrate compliance with the hourly allowable VOC limitation by multiplying the maximum hourly gas burning capacity of the emissions unit (mm cu. ft./hour) by the AP-42, Table 1.4-2 (revised 7/98) emission factor for natural gas (5.5 lbs VOC/mm cu. ft).

If required, the permittee shall demonstrate compliance with the limitation above in accordance with 40 CFR, Part 60, Appendix A, Methods 1 - 4, and 25.

1.e Emission Limitation:
0.37 lb HCl/hr

Applicable Compliance Method:
The permittee may determine compliance based on the results of emission testing conducted in accordance with Methods 1 - 4 and 26 of 40 CFR, Part 60, Appendix A.

1.f Emission Limitations:
1.66 ton PE /yr
6.26 ton NOx /yr
5.25 ton CO /yr
3.99 ton OC /yr
1.62 ton HCl /yr

Applicable Compliance Method:
Compliance with the annual emission limitation for each pollutant above shall be assumed as long as compliance with the hourly emission limitation for the specific pollutant is maintained (the annual emission limitation for each pollutant was determined by multiplying the hourly emission limitation for the specific pollutant by 8760, and then dividing by 2000).

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 12 months following the issuance of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for hydrogen chloride.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: Method 26, 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

V. Testing Requirements (continued)

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

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

2. Additional Terms and Conditions

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: C-5 (P014)

Activity Description: L2 Spray Lehr - Sn Chloride application

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
tin chloride application (for L2 Spray Lehr), with settling chamber and 'venturi and packed tower' wet scrubber system	OAC rule 3745-31-05 (PTI 03-8163)	1.0 lb particulate emissions (PE)/hr
		0.47 lb tin/hr
		0.42 lb hydrogen chloride (HCl)/hr
	OAC rule 3745-17-11(B)	none (See A.I.2.a.)
	OAC rule 3745-17-07(A)	none (See A.I.2.b.)

2. Additional Terms and Conditions

2.a 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 because the facility is located in Crawford County, which is identified as a P-2 county.

2.b This emissions unit is exempt from the visible emissions 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.c Sections A.I.2.a and b above are intended for clarification of current regulatory applicability under this permit at time of issuance, and are not intended to address or prohibit any change that could otherwise be processed under OAC rule 3745-77-07(I).

II. Operational Restrictions

1. The pressure drop across the high energy venturi section of the scrubber system shall be maintained at a value of not less than 35 inches of water at all times while the emissions unit is in operation.

2. The water flow rate through the packed tower section of the scrubber system shall be maintained at a value of not less than 150 gallons per minute at all times while the emissions unit is in operation.

3. The pH of the scrubber system treatment tank water shall be maintained within the range of 5.5 to 8.5.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to continuously monitor the static pressure drop across the venturi section and water flow rate to the packed tower section while the emissions unit is in operation. The monitoring devices and any recorders shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals, or good engineering practice.

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

a. The pressure drop across the venturi section, in inches of water, on a daily basis.

b. The water flow rate to the packed tower section, in gallons per minute, on a daily basis.

2. The permittee shall properly operate and maintain equipment to continuously monitor the pH of the scrubber system treatment tank water while the emissions unit is in operation. The pH monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals, or good engineering practice.

The permittee shall collect and record the following information each day: the pH of the treatment tank water.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at the required levels:

a. The static pressure drop across the venturi section.

b. The water flow rate for the packed tower section.

c. The pH of the scrubber system treatment tank water.

The deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

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):

1.a Emission Limitation:
1.0 lb PE/hr

Applicable Compliance Method:
If required, the permittee shall determine compliance with the limitation above in accordance with 40 CFR, Part 60, Appendix A, Methods 1 - 5. [The results of emission testing conducted on April 16, 1996 indicated that the PE rate was 0.13 lb PE/hr.]

1.b Emission Limitation:
0.47 lbs tin/hr

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with the limitation above in accordance with 40 CFR, Part 60, Appendix A, Methods 1 - 4 and 29. [The results of emission testing conducted on April 16, 1996 indicated that the tin emission rate was 0.06 lb tin/hr.]

1.c Emission Limitation:
0.42 lb HCl/hr

Applicable Compliance Method:
The permittee shall demonstrate compliance based on the results of emission testing conducted in accordance with Methods 1 - 4 and 26 of 40 CFR, Part 60, Appendix A.

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 12 months following the issuance of this permit. If this emissions unit is not operating at the time of permit issuance, the permittee may conduct the testing at a later date, within 12 months of the resumption of full operation of the emissions unit.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for hydrogen chloride.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: Method 26, 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

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

2. Additional Terms and Conditions

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: C-4 (P015)

Activity Description: L2 Spray Lehr - Natural gas fired oven

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
L-2 natural gas-fired Lehr oven	OAC rule 3745-31-05 (PTI 03-13538)	6.43 lbs of nitrogen oxides (NOx)/hour; 28.16 tons of NOx/year The requirements of this rule also include compliance with the requirements of OAC rules 3745-18-06(E), 3745-21-08(B) and 3745-23-06(B).
	OAC rule 3745-17-11(B)(2)	See A.I.2.a.
	OAC rule 3745-17-07(A)(1)	See A.I.2.b.
	OAC rule 3745-23-06(B) OAC rule 3745-21-08(B)	See A.I.2.c.
	OAC rule 3745-18-06(E)	Exempt, see A.I.2.d.

2. Additional Terms and Conditions

2.a 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 because the facility is located in Crawford County, which is identified as a P-2 county.

2.b This emissions unit is exempt from the visible emissions 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.c The permittee has satisfied the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06, respectively by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 03-13538.

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. Additional Terms and Conditions (continued)

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

II. Operational Restrictions

1. The permittee shall burn only natural gas as fuel in this emissions unit.

III. Monitoring and/or Record Keeping 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.

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.

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):

1.a Emission Limitation:
6.43 lbs of NOx/hour

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

* The potential to emit for this emissions unit is based on an emission factor of 0.383 lb of NOx/mmBtu (based on stack test of similar emissions unit performed in 11/91), a maximum natural gas usage rate of 16.8 mmBtu/hour.

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

1.b Emission Limitation:
28.16 tons of NOx/year

Applicable Compliance Method:
Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was determined by multiplying the hourly emission limitation by 8760, and then dividing by 2000).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

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

2. Additional Terms and Conditions

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: C-1B (P016)

Activity Description: Coater 2

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
phosphor coating - coater 2	OAC rule 3745-21-07(G)	none (See section A.I.2.a.)
	OAC rule 3745-17-11(B)(2)	none (See section A.I.2.b.)
	OAC rule 3745-17-07(A)	none (See section A.I.2.c.)

2. Additional Terms and Conditions

2.a This facility is not located in a "Priority I" county (it is located in Crawford County) as indicated in paragraph (A) of OAC rule 3745-21-06, and is not a "new source" as defined in OAC 3745-15-01(R). Therefore, pursuant to OAC rule 3745-21-07(A), it is exempt from the requirements of OAC rule 3745-21-07(G).

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 because 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 emissions 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 Sections A.I.2.a, b and c above are intended for clarification of current regulatory applicability under this permit at time of issuance, and are not intended to address or prohibit any change that could otherwise be processed under OAC rule 3745-77-07(I).

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

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

2. Additional Terms and Conditions

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: C-1C (P017)

Activity Description: Coater 3

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
phosphor coating - coater 3	OAC rule 3745-21-07(G)	none (See section A.I.2.a.)
	OAC rule 3745-17-11(B)(2)	none (See section A.I.2.b.)
	OAC rule 3745-17-07(A)	none (See section A.I.2.c.)

2. Additional Terms and Conditions

2.a This facility is not located in a "Priority I" county (it is located in Crawford County) as indicated in paragraph (A) of OAC rule 3745-21-06, and is not a "new source" as defined in OAC 3745-15-01(R). Therefore, pursuant to OAC rule 3745-21-07(A), it is exempt from the requirements of OAC rule 3745-21-07(G).

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 because 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 emissions 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 Sections A.I.2.a, b and c above are intended for clarification of current regulatory applicability under this permit at time of issuance, and are not intended to address or prohibit any change that could otherwise be processed under OAC rule 3745-77-07(I).

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

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

2. Additional Terms and Conditions

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: L-1,L-2 (P018)

Activity Description: Vertical lamp assembly line with Lehr Group 4

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
vertical lamp assembly line (Lehr group 4) - with cyclones and carbon adsorber	OAC rule 3745-17-11(B)(2)	none (See A.I.2.a.)
	OAC rule 3745-17-07(A)(1-3)	none (See A.I.2.b.)
	OAC rule 3745-21-07(G)	none (See A.I.2.c.)

2. Additional Terms and Conditions

2.a 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 because the facility is located in Crawford County, which is identified as a P-2 county.

2.b This emissions unit is exempt from the visible emissions 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.c This facility is not located in a "Priority I" county (it is located in Crawford County) as indicated in paragraph (A) of OAC rule 3745-21-06, and is not a "new source" as defined in OAC 3745-15-01(R). Therefore, pursuant to OAC rule 3745-21-07(A), it is exempt from the requirements of OAC rule 3745-21-07(G).

2.d Sections A.I.2.a, b and c above are intended for clarification of current regulatory applicability under this permit at time of issuance, and are not intended to address or prohibit any change that could otherwise be processed under OAC rule 3745-77-07(I).

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

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

2. Additional Terms and Conditions

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: L-1,L-2 (P019)

Activity Description: Vertical lamp assembly line with Lehr Group 7

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
vertical lamp assembly line (Lehr group 7) - with cyclones and carbon adsorber	OAC rule 3745-17-11(B)(2)	none (See A.I.2.a.)
	OAC rule 3745-17-07(A)(1-3)	none (See A.I.2.b.)
	OAC rule 3745-21-07(G)	none (See A.I.2.c.)

2. Additional Terms and Conditions

2.a 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 because the facility is located in Crawford County, which is identified as a P-2 county.

2.b This emissions unit is exempt from the visible emissions 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.c This facility is not located in a "Priority I" county (it is located in Crawford County) as indicated in paragraph (A) of OAC rule 3745-21-06, and is not a "new source" as defined in OAC 3745-15-01(R). Therefore, pursuant to OAC rule 3745-21-07(A), it is exempt from the requirements of OAC rule 3745-21-07(G).

2.d Sections A.I.2.a, b and c above are intended for clarification of current regulatory applicability under this permit at time of issuance, and are not intended to address or prohibit any change that could otherwise be processed under OAC rule 3745-77-07(I).

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

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

2. Additional Terms and Conditions

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: L-1, L-3 (P020)

Activity Description: Medium speed Horizontal (MSH) lamp assembly line with Lehr Group H

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
medium speed horizontal (MSH) lamp assembly line (Lehr group H) - with cyclones and carbon adsorber	OAC rule 3745-17-11(B)(2)	none (See A.I.2.a.)
	OAC rule 3745-17-07(A)(1-3)	none (See A.I.2.b.)
	OAC rule 3745-21-07(G)	none (See A.I.2.c.)

2. Additional Terms and Conditions

2.a 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 because the facility is located in Crawford County, which is identified as a P-2 county.

2.b This emissions unit is exempt from the visible emissions 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.c This facility is not located in a "Priority I" county (it is located in Crawford County) as indicated in paragraph (A) of OAC rule 3745-21-06, and is not a "new source" as defined in OAC 3745-15-01(R). Therefore, pursuant to OAC rule 3745-21-07(A), it is exempt from the requirements of OAC rule 3745-21-07(G).

2.d Sections A.I.2.a, b and c above are intended for clarification of current regulatory applicability under this permit at time of issuance, and are not intended to address or prohibit any change that could otherwise be processed under OAC rule 3745-77-07(I).

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

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

2. Additional Terms and Conditions

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: L-1, L-3 (P021)

Activity Description: Medium speed Horizontal (MSH) lamp assembly line with Lehr Group I

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
medium speed horizontal (MSH) lamp assembly line (Lehr group I) - with cyclones and carbon adsorber	OAC rule 3745-17-11(B)(2)	none (See A.I.2.a.)
	OAC rule 3745-17-07(A)(1-3)	none (See A.I.2.b.)
	OAC rule 3745-21-07(G)	none (See A.I.2.c.)

2. Additional Terms and Conditions

2.a 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 because the facility is located in Crawford County, which is identified as a P-2 county.

2.b This emissions unit is exempt from the visible emissions 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.c This facility is not located in a "Priority I" county (it is located in Crawford County) as indicated in paragraph (A) of OAC rule 3745-21-06, and is not a "new source" as defined in OAC 3745-15-01(R). Therefore, pursuant to OAC rule 3745-21-07(A), it is exempt from the requirements of OAC rule 3745-21-07(G).

2.d Sections A.I.2.a, b and c above are intended for clarification of current regulatory applicability under this permit at time of issuance, and are not intended to address or prohibit any change that could otherwise be processed under OAC rule 3745-77-07(I).

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

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

2. Additional Terms and Conditions

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: C-2B (P022)

Activity Description: West Spray Lehr

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
west spray lehr (with tin chloride application) direct-fired natural gas, 13.6 mmBtu/hr, with settling chamber and 'venturi and packed tower' wet scrubber system	OAC rule 3745-31-05 (PTI 03-5922)	0.38 lb particulate emissions (PE)/hr, 1.66 tons/yr PE 1.20 lb carbon monoxide (CO)/hr, 5.25 tons/yr CO 1.43 lbs nitrogen oxides (NOx)/hr, 6.26 tons/yr NOx 0.91 lb volatile organic compounds (VOC) /hr, 3.99 tons/yr VOC 0.37 lb hydrogen chloride (HCl)/hr, 1.62 tons/yr HCl The requirements of this rule also include compliance with the requirements of OAC rules 3745-18-06(E), 3745-21-08(B) and 3745-23-06(B).
	OAC rule 3745-17-11(B)	none (See A.I.2.a.)
	OAC rule 3745-17-07(A)	none (See A.I.2.b.)
	OAC rule 3745-18-06(E)	Exempt, See A.I.2.c.
	OAC rule 3745-23-06(B)	See A.I.2.d.
	OAC rule 3745-21-08(B)	See A.I.2.d.

2. Additional Terms and Conditions

2.a 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 because the facility is located in Crawford County, which is identified as a P-2 county.

2.b This emissions unit is exempt from the visible emissions 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. Additional Terms and Conditions (continued)

2.c 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.d The permittee has satisfied the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06, respectively by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 03-5922.

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.e Sections A.I.2.a, b. and c above are intended for clarification of current regulatory applicability under this permit at time of issuance, and are not intended to address or prohibit any change that could otherwise be processed under OAC rule 3745-77-07(I).

II. Operational Restrictions

1. The pressure drop across the high energy venturi section of the scrubber system shall be maintained at a value of not less than 35 inches of water at all times while the emissions unit is in operation.

2. The water flow rate through the packed tower section of the scrubber system shall be maintained at a value of not less than 150 gallons per minute at all times while the emissions unit is in operation.

3. The pH of the scrubber water from the treatment tank shall be maintained within the range of 5.5 to 8.5 at all times while the emissions unit is in operation.

4. The permittee shall burn only natural gas, or other such 'inherently clean' fuel that would result in emissions that comply with the limitations and restrictions of this permit, in this emissions unit.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to continuously monitor the static pressure drop across the venturi section and water flow rate to the packed tower section while the emissions unit is in operation. The monitoring devices and any recorders shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals, or good engineering practice.

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

a. The pressure drop across the venturi section, in inches of water, on a daily basis.

b. The water flow rate to the packed tower section, in gallons per minute, on a daily basis.

2. The permittee shall properly operate and maintain equipment to continuously monitor the pH of the scrubber system treatment tank water while the emissions unit is in operation. The pH monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals, or good engineering practice.

The permittee shall collect and record the following information each day: the pH of the treatment tank water.

3. For each day during which the permittee burns a fuel other than natural gas or other inherently clean fuel, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at the required levels:

a. The static pressure drop across the venturi section.

b. The water flow rate for the packed tower section.

c. The pH of the scrubber system treatment tank water.

The deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

2. The permittee shall submit deviation (excursion) reports that identify each day when any fuel was burned in this emissions unit other than natural gas or other inherently clean fuel. Each report shall be submitted within 30 days after the deviation occurs.

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):

1.a Emission Limitation:
0.38 lb PE/hr

Applicable Compliance Method:
To determine the actual maximum PE rate (E), the permittee may use the following equation:

E = E1 + E2

E1 = 0.15 lb PE/hr (determined by multiplying the maximum hourly natural gas burning capacity of the emissions unit (mm cu. ft./hour) by the AP-42, Table 1.4-2 (revised 7/98) emission factor for natural gas (1.9 lbs PE/mm cu. ft))

E2 = 0.10 lb PE/hr (determined based on the results of emission testing conducted for emissions unit P009 in November, 1991)

If required, the permittee shall demonstrate compliance with the limitation above in accordance with 40 CFR, Part 60, Appendix A, Methods 1 - 5.

1.b Emission Limitation:
1.43 lbs NOx/hr

Applicable Compliance Method:
The permittee may demonstrate compliance with the hourly allowable NOx limitation by multiplying the maximum hourly gas burning capacity of the emissions unit (mm cu. ft./hour) by the AP-42, Table 1.4-1 (revised 7/98) emission factor for natural gas (100 lbs NOx/mm cu. ft).

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

1.c Emission Limitation:
1.20 lb CO/hr

Applicable Compliance Method:
The permittee may demonstrate compliance with the hourly allowable CO limitation by multiplying the maximum hourly gas burning capacity of the emissions unit (mm cu. ft./hour) by the AP-42, Table 1.4-1 (revised 7/98) emission factor for natural gas (84 lbs CO/mm cu. ft).

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.

V. Testing Requirements (continued)

1.d Emission Limitation:
0.91 lb VOC/hr

Applicable Compliance Method:
The permittee may demonstrate compliance with the hourly allowable VOC limitation by multiplying the maximum hourly gas burning capacity of the emissions unit (mm cu. ft./hour) by the AP-42, Table 1.4-2 (revised 7/98) emission factor for natural gas (5.5 lbs VOC/mm cu. ft).

If required, the permittee shall demonstrate compliance with the limitation above in accordance with 40 CFR, Part 60, Appendix A, Methods 1 - 4, and 25.

1.e Emission Limitation:
0.37 lb HCl/hr

Applicable Compliance Method:
The permittee may determine compliance based on the results of emission testing conducted in accordance with Methods 1 - 4 and 26 of 40 CFR, Part 60, Appendix A.

1.f Emission Limitations:
1.66 ton PE /yr
6.26 ton NOx /yr
5.25 ton CO /yr
3.99 ton OC /yr
1.62 ton HCl /yr

Applicable Compliance Method:
Compliance with the annual emission limitation for each pollutant above shall be assumed as long as compliance with the hourly emission limitation for the specific pollutant is maintained (the annual emission limitation for each pollutant was determined by multiplying the hourly emission limitation for the specific pollutant by 8760, and then dividing by 2000).

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 12 months following the issuance of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for hydrogen chloride.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: Method 26, 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

V. Testing Requirements (continued)

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

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

2. Additional Terms and Conditions

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: BR-1 (P033)

Activity Description: Bulb Crushing System

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
Bulb Crushing System (consisting of a chopper hopper, crusher feeders, a silo, and a sieve)	OAC rule 3745-31-05 (A)(3) (PTI 03-13601	0.46 lb of particulate emissions (PE)/hour, 2.01 tons of PE/year 0.003 lb of Hg/hour, 0.013 ton of Hg/year See A.I.2.a. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07 (A)(1).
	OAC rule 3745-17-11 (B)(2)	See A.I.2.b.
	OAC rule 3745-17-07 (A)(1)	Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as provided by rule.

2. Additional Terms and Conditions

2.a Best available technology (BAT) for this emissions unit has been determined to be the following:

i. for the chopper hopper and the crusher: use of a control system consisting of a fabric filter (hose filter) followed by a carbon adsorption unit.

ii. for the sieve and silo: use of a control system consisting of a cyclone followed by a fabric filter (hose filter) and carbon adsorption unit.

The control systems for the chopper hopper, crusher, sieve and silo shall achieve an overall control efficiency of 99.5% (100% capture) for PE and Hg.

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

II. Operational Restrictions

1. The pressure drop across each fabric filter (hose filter) shall be maintained within the range of 0.2 - 4 inches of water while the emissions unit is in operation.

II. Operational Restrictions (continued)

2. The pressure drop across each carbon adsorber shall be maintained within the range of 1 - 8 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across each fabric filter (hose filter) 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 each fabric filter (hose filter) on a daily basis.

2. The permittee shall operate and maintain a continuous monitor that measures the pressure drop across the carbon adsorber serving this emissions unit. The monitor shall be 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 week:

a. The pressure drop across the carbon adsorber.

b. A log or record of the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that include the following information:

a. identification of all periods of time during which the pressure drop across either fabric filter (hose filter) did not comply with the allowable range specified in A.II.1.

b. identification of all periods of time during which the pressure drop across either carbon adsorber did not comply with the allowable range specified in A.II.2.

The deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

2. The permittee shall submit quarterly summaries that include a log the downtime for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.

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):

1.a Emission Limitation
0.46 pound of PE per hour

Applicable Compliance Method
The hourly allowable PE limitation was established by multiplying the maximum bulb crushing rate of 6000 bulbs per hour by a "worst case" PE rate of 7.0 grams per bulb (based on a maximum phosphor content) and by an overall control factor of (1 - 0.995)*, and then dividing by 453.59.

If required, the permittee shall demonstrate compliance with the hourly allowable PE limitation above in accordance with 40 CFR, Part 60, Appendix A, Methods 1 - 5.

* the overall control efficiency for the baghouse and carbon adsorber is assumed to be 99.5%

V. Testing Requirements (continued)

1.b Emission Limitation
2.01 tons of PE per year

Applicable Compliance Method
Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was determined by multiplying the hourly emission limitation by 8760, and then dividing by 2000).

1.c Emission Limitation
0.003 lb Hg per hour

Applicable Compliance Method
The hourly allowable Hg emission limitation was established by multiplying the maximum bulb crushing rate of 6,000 bulbs per hour by the maximum Hg content of the bulbs of 0.050 gram per bulb and by an overall control factor of (1 - 0.995)*, and then dividing by 453.59.

If required, the permittee shall demonstrate compliance with the hourly allowable Hg emission limitation above based on the results of emission testing conducted in accordance with 40 CFR, Part 60, Appendix A, Methods 1 - 4 and 29.

* the overall control efficiency for the baghouse and carbon adsorber is assumed to be 99.5%

1.d Emission Limitation
0.013 ton of Hg per year

Applicable Compliance Method
Compliance with the annual emission limitation shall be assumed as long as compliance with the hourly emission limitation is maintained (the annual emission limitation was determined by multiplying the hourly emission limitation by 8760, and then dividing by 2000).

1.e Emission Limitation
Visible PE shall not exceed 20 percent opacity, as a six-minute average except as provided by rule.

Applicable Compliance Method
If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

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

2. Additional Terms and Conditions

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: MX-1 (R001)

Activity Description: Varnish Mix Tank and planetary mixer

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
varnish mix tank and 'planetary' mixer, with baghouse	OAC rule 3745-31-05 (PTI 03-11289)	0.1 lb particulate emissions (PE)/hr
		1.17 lbs organic compounds (OC)/hr
		Visible PE shall not exceed 5% opacity, as a six-minute average.
	OAC rule 3745-17-11(B)	none (See A.I.2.a.)
	OAC rule 3745-17-07(A)	none (See A.I.2.b.)

2. Additional Terms and Conditions

2.a 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 because the facility is located in Crawford County, which is identified as a P-2 county.

2.b This emissions unit is exempt from the visible emissions 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.c The OC limitation of 1.17 lbs/hr was established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and reporting requirements to ensure compliance with this limit.

2.d This emissions unit is not subject to OAC rule 3745-21-07(G)(2) as determined by the Ohio Supreme Court in Ashland Chem. Co. v. Jones (2001), 92 Ohio St.3.d 234.

2.e Sections A.I.2.a, b and d above are intended for clarification of current regulatory applicability under this permit at time of issuance, and are not intended to address or prohibit any change that could otherwise be processed under OAC rule 3745-77-07(I).

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 2 to 8 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the process baghouse while the emissions unit is in operation. The monitoring equipment shall be 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 process baghouse on a weekly basis.

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 baghouse serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify each period where the recorded pressure drop was not within the range specified in Section A.II.1 above. The deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

2. The permittee shall submit quarterly written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. The deviation reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

V. Testing Requirements

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

1.a Emission Limitation:
0.1 lb PE/hr

Applicable Compliance Method:
To determine the actual maximum PE rate (E), the permittee may use the following equation:

E = maximum process throughput*, in tons per hour X [EF X (1-CE)]

E = PE rate (lbs/hr)

EF = 20 lbs PE/ton**

CE = control efficiency of the baghouse control system (assumed to be 99 percent)

* 232 lbs/hr, from the Title V permit application (80% is solids)

** based on AP-42, Table 6.4-1 (revised 5/83)

If required, the permittee shall demonstrate compliance with the limitation above in accordance with 40 CFR, Part 60, Appendix A, Methods 1 - 5.

V. Testing Requirements (continued)

1.b Emission Limitation:
1.17 lbs OC/hr

Applicable Compliance Method:

The permittee may determine compliance with the limitation above as follows:

E = E1 + E2

where:

E = OC emission rate (lbs/hr)

E1 = the maximum process throughput* (in tons per hour) x (EF)

E2 = the maximum cleanup material usage rate (gallons/hr) x the maximum OC content of all the cleanup materials (lbs/gallon)

EF = 30 lbs OC/ton**

* 232 lb/hr, from the Title V permit application (the OC content is assumed to be 20%)

** based on AP-42, Table 6.4-1 (revised 5/83)

If required, the permittee shall demonstrate compliance with the limitation above in accordance with 40 CFR, Part 60, Appendix A, Methods 1 - 4 and 25.

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

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with the visible emission limitation above in accordance with 40 CFR, Part 60, Appendix A, Method 9.

2. Formulation data or USEPA Method 24 shall be used to determine the VOC contents of all the coatings.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
varnish mix tank and 'planetary' mixer - with baghouse	none	none

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

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

Pollutant: ethanol

TLV (ug/m3): 1,880,000

Maximum Hourly Emission Rate (lbs/hr): 0.63

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 28

MAGLC (ug/m3): 44,760

III. Monitoring and/or Record Keeping Requirements (continued)

2. 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 still 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 (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.

3. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that a 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.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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