



11/20/2013

Matt Moyer
 GE Lighting Inc - Bucyrus Lamp Plant
 1250 South Walnut Street
 Bucyrus, OH 44820

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
 Facility ID: 0317010010
 Permit Number: P0114589
 Permit Type: Initial Installation
 County: Crawford

Certified Mail

| | |
|-----|------------------------------------|
| Yes | TOXIC REVIEW |
| No | PSD |
| No | SYNTHETIC MINOR TO AVOID MAJOR NSR |
| No | CEMS |
| No | MACT/GACT |
| No | NSPS |
| No | NESHAPS |
| No | NETTING |
| No | MAJOR NON-ATTAINMENT |
| No | MODELING SUBMITTED |
| No | MAJOR GHG |
| No | SYNTHETIC MINOR TO AVOID MAJOR GHG |

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
 77 South High Street, 17th Floor
 Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Ohio EPA DAPC, Northwest District Office at (419)3528461 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA
Ohio EPA-NWDO; Canada



FINAL

**Division of Air Pollution Control
Permit-to-Install
for
GE Lighting Inc - Bucyrus Lamp Plant**

| | |
|----------------|----------------------|
| Facility ID: | 0317010010 |
| Permit Number: | P0114589 |
| Permit Type: | Initial Installation |
| Issued: | 11/20/2013 |
| Effective: | 11/20/2013 |



Division of Air Pollution Control
Permit-to-Install
for
GE Lighting Inc - Bucyrus Lamp Plant

Table of Contents

| | |
|--|----|
| Authorization | 1 |
| A. Standard Terms and Conditions | 3 |
| 1. Federally Enforceable Standard Terms and Conditions | 4 |
| 2. Severability Clause | 4 |
| 3. General Requirements | 4 |
| 4. Monitoring and Related Record Keeping and Reporting Requirements..... | 5 |
| 5. Scheduled Maintenance/Malfunction Reporting | 6 |
| 6. Compliance Requirements | 6 |
| 7. Best Available Technology | 7 |
| 8. Air Pollution Nuisance | 8 |
| 9. Reporting Requirements | 8 |
| 10. Applicability | 8 |
| 11. Construction of New Sources(s) and Authorization to Install | 8 |
| 12. Permit-To-Operate Application | 9 |
| 13. Construction Compliance Certification | 10 |
| 14. Public Disclosure | 10 |
| 15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations | 10 |
| 16. Fees..... | 10 |
| 17. Permit Transfers | 10 |
| 18. Risk Management Plans | 10 |
| 19. Title IV Provisions | 10 |
| B. Facility-Wide Terms and Conditions..... | 11 |
| C. Emissions Unit Terms and Conditions | 13 |
| 1. P011, BC-1 | 14 |
| 2. P043, EESW Flare Machines..... | 19 |
| 3. Emissions Unit Group -Basefill Machines: P038 and P039..... | 22 |
| 4. Emissions Unit Group -Lamp Assembly Lines: P040, P041, and P042 | 25 |



Final Permit-to-Install
GE Lighting Inc - Bucyrus Lamp Plant
Permit Number: P0114589
Facility ID: 0317010010
Effective Date: 11/20/2013

Authorization

Facility ID: 0317010010
Facility Description: Fluorescent Lamp Manufacturing
Application Number(s): A0047801, A0048647, A0048914
Permit Number: P0114589
Permit Description: PTI for the installation of three new energy efficient soft white (EESW) lamp manufacturing lines.
Permit Type: Initial Installation
Permit Fee: \$1,400.00
Issue Date: 11/20/2013
Effective Date: 11/20/2013

This document constitutes issuance to:

GE Lighting Inc - Bucyrus Lamp Plant
GE Company - Bucyrus Lamp Plant
1250 South Walnut Street
Bucyrus, OH 44820

of a Permit-to-Install for the emissions unit(s) identified on the following page.

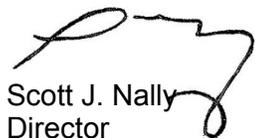
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402
(419)352-8461

The above named entity is hereby granted a Permit-to-Install for the emissions unit(s) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency



Scott J. Nally
Director



Authorization (continued)

Permit Number: P0114589

Permit Description: PTI for the installation of three new energy efficient soft white (EESW) lamp manufacturing lines.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

| | |
|-----------------------------------|--------------------|
| Emissions Unit ID: | P011 |
| Company Equipment ID: | BC-1 |
| Superseded Permit Number: | |
| General Permit Category and Type: | Not Applicable |
| | |
| Emissions Unit ID: | P043 |
| Company Equipment ID: | EEH Flare Machines |
| Superseded Permit Number: | |
| General Permit Category and Type: | Not Applicable |

Group Name: Basefill Machines

| | |
|-----------------------------------|----------------------------|
| Emissions Unit ID: | P038 |
| Company Equipment ID: | EEH Basefill Machine No. 1 |
| Superseded Permit Number: | |
| General Permit Category and Type: | Not Applicable |
| Emissions Unit ID: | P039 |
| Company Equipment ID: | EEH Basefill Machine No. 2 |
| Superseded Permit Number: | |
| General Permit Category and Type: | Not Applicable |

Group Name: Lamp Assembly Lines

| | |
|-----------------------------------|-------------------------|
| Emissions Unit ID: | P040 |
| Company Equipment ID: | EEH Lamp Assembly No. 1 |
| Superseded Permit Number: | |
| General Permit Category and Type: | Not Applicable |
| Emissions Unit ID: | P041 |
| Company Equipment ID: | EEH Lamp Assembly No. 2 |
| Superseded Permit Number: | |
| General Permit Category and Type: | Not Applicable |
| Emissions Unit ID: | P042 |
| Company Equipment ID: | EEH Lamp Assembly No. 3 |
| Superseded Permit Number: | |
| General Permit Category and Type: | Not Applicable |



Final Permit-to-Install
GE Lighting Inc - Bucyrus Lamp Plant
Permit Number: P0114589
Facility ID: 0317010010
Effective Date: 11/20/2013

A. Standard Terms and Conditions



1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
 - (1) Standard Term and Condition A.2.a), Severability Clause
 - (2) Standard Term and Condition A.3.c) through A. 3.e) General Requirements
 - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
 - (4) Standard Term and Condition A.9., Reporting Requirements
 - (5) Standard Term and Condition A.10., Applicability
 - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
 - (7) Standard Term and Condition A.14., Public Disclosure
 - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (9) Standard Term and Condition A.16., Fees
 - (10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

- a) 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.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they 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 and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

- a) 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 re-issuance, or modification.



- 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, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying 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.

4. 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:
 - (1) The date, place (as defined in the permit), and time of sampling or measurements.
 - (2) The date(s) analyses were performed.
 - (3) The company or entity that performed the analyses.
 - (4) The analytical techniques or methods used.
 - (5) The results of such analyses.
 - (6) The operating conditions existing at the time of sampling or measurement.
- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Northwest District Office.



- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Northwest District Office. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.
 - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the Ohio EPA DAPC, Northwest District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
 - (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. Scheduled Maintenance/Malfunction Reporting

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

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

6. Compliance Requirements

- a) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the appropriate Ohio EPA District Office or contracted



local air agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the electronic signature date shall constitute the date that the required application, notification or report is considered to be "submitted". Any document requiring signature may be represented by entry of the personal identification number (PIN) by responsible official as part of the electronic submission process or by the scanned attestation document signed by the Authorized Representative that is attached to the electronically submitted written report.

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

- b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - (1) 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.
 - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - (4) 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 Ohio EPA DAPC, Northwest District Office 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:
 - (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) 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.

7. Best Available Technology

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.



8. 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.

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Northwest District Office.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Northwest District Office. 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, 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.)

10. Applicability

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s) not exempt from the requirement to obtain a Permit-to-Install.

11. Construction of New Sources(s) and Authorization to Install

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the



Director within a reasonable time before the termination date and the permittee shows good cause for any such extension.

- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update electronically will constitute notifying the Director of the permanent shutdown of the affected emissions unit(s).
- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

Unless otherwise exempted, no emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31 and OAC Chapter 3745-77 if the restarted operation is subject to one or more applicable requirements.

- e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

12. Permit-To-Operate Application

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



13. Construction Compliance Certification

The applicant shall identify the following dates in the "Air Services" facility profile for each new emissions unit identified in this permit.

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. Public Disclosure

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

15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

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 by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

16. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in "Air Services" once the transfer is legally completed. The change must be submitted through "Air Services" within thirty days of the ownership transfer date.

18. Risk Management Plans

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

19. 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.



Final Permit-to-Install
GE Lighting Inc - Bucyrus Lamp Plant
Permit Number: P0114589
Facility ID: 0317010010
Effective Date: 11/20/2013

B. Facility-Wide Terms and Conditions



Final Permit-to-Install
GE Lighting Inc - Bucyrus Lamp Plant
Permit Number: P0114589
Facility ID: 0317010010
Effective Date: 11/20/2013

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
 - a) None.



Final Permit-to-Install
GE Lighting Inc - Bucyrus Lamp Plant
Permit Number: P0114589
Facility ID: 0317010010
Effective Date: 11/20/2013

C. Emissions Unit Terms and Conditions



1. P011, BC-1

Operations, Property and/or Equipment Description:

Base Cement Mixing

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) b)(1)f. and d)(1).

b) Applicable Emissions Limitations and/or Control Requirements

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

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|--|--|
| a. | OAC rule 3745-31-05(F) | <u>Stack Emissions:</u> Particulate matter equal to or less than 10 microns in size (PM10) shall not exceed 0.04 lb/hr and 0.18 ton/year <u>Non-Stack Egress Emissions:</u> PM10 emissions shall not exceed 2.93 tons/year See b)(2)a. |
| b. | OAC rule 3745-31-05(A)(3), as effective 11/30/01 | 0.21 ton volatile organic compounds (VOC)/month averaged over a 12-month rolling period; Use of a dust collector with a design control efficiency of at least 99% control of captured particulate matter. See b)(2)b. |
| c. | OAC rule 3745-31-05(A)(3), as effective 12/01/06 | See b)(2)c. |
| d. | OAC rule 3745-17-11(B) | See b)(2)d. |
| e. | OAC rule 3745-17-07(A) | See b)(2)e. |
| f. | OAC rule 3745-114 and ORC 3704.03 (F) | See d)(1) |
| g. | OAC rule 3745-21-07(M) | See b)(2)f. |



(2) Additional Terms and Conditions

- a. This permit establishes the following voluntary restrictions that are legally and practically enforceable limitations. These emission limitations are based on the operational restriction contained in c)(1) which requires a dust collector to control particulate matter:

- i. 0.04 lb PM10/hr and 0.18 ton PM10/yr from dust collector stack;
- ii. 2.93 tons PM10/yr (non-stack egress);

Emissions unit P011 is an operation involving a mixer located in a 4-sided room where emissions generated are collected by a capture system (85% collection efficiency). Emissions that are not captured are released within the room and emitted to the atmosphere through non-stack egress points in the vicinity of Base Cement Mixing such as building windows, doors, etc. Stack and non-stack emissions of particulate matter are considered to be PM10.

- b. The BAT requirements under OAC rule 3745-31-05(A)(3), effective 11/30/01 have been determined to the following:

- i. 0.21 ton VOC/month averaged over a 12-month rolling period ; and
- ii. use of a dust collector with a design control efficiency of at least 99% control of captured particulate matter.

The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05 (A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutant less than ten tons per year. However, that rule revision has not yet been approved by 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 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits/control measures no longer apply.

It should be noted that the voluntary restrictions established pursuant to OAC rule 3745-31-05(F) were established in part for the purpose of avoiding BAT requirements under OAC rule 3745-31-05(A), as effective 12/01/06 [see b)(2)c.] and will remain applicable after the above SIP revisions are approved by U.S. EPA.

- c. This rule applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3)(a), as effective 12/01/06, do not apply to the PM10 emissions from this



air contaminant source since the controlled potential to emit (PTE) is less than 10 tons per year taking into consideration practically and legally enforceable voluntary restrictions established under OAC rule 3745-31-05(F) in this permit. BAT requirements also do not apply to the VOC emissions from this air contaminant source since the uncontrolled potential to emit (PTE) is less than 10 tons per year. The potential to emit for VOC is 2.54 tons per year, calculated by multiplying an AP-42 emission factor (Section 6.4 for Paint & Varnish Manufacture) of 30 lbs/ton by a maximum throughput capacity of 0.019 tons volatile material/hour, multiplying by 8760 hours per year and dividing by 2000 lbs/ton.

- d. The uncontrolled mass rate of particulate emissions (PE) 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.
- e. 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.
- f. This emissions unit is not subject to the requirements of this rule because it does not meet all of the conditions outlined in OAC rule 3745-21-07(M)(3)(a).

c) Operational Restrictions

- (1) The following operational restriction has been included in this permit for the purpose of establishing legally and practically enforceable requirements [see b)(2)a.]:
 - a. This emissions unit shall be vented to a dust collector, capable of achieving a control efficiency of 99% for captured particulate matter.

d) Monitoring and/or Recordkeeping Requirements

- (1) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary for this emissions unit because each individual toxic air contaminant, as defined in OAC rule 3745-114-01, from this emissions unit and all emissions units contained in this permit-to-install (PTI) action will be less than 1.0 ton per year combined. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit-to-install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit-to-install.
- (2) The permittee shall collect and record the following information each month for this emissions unit:
 - a. The company identification for each VOC-containing base cement ingredient used in emissions unit P011;



- b. The number of pounds (lbs.) of each VOC-containing base cement ingredient used;
- c. The VOC content of each VOC-containing base cement ingredient used (in lb/lb);
- d. The total VOC emissions from each VOC-containing base cement ingredient used [d)(4)b. x d)(4)c.], in lbs.;
- e. Following 12 months of operation, the rolling 12-month summation of VOC emissions and the average calculated over each rolling 12-month period.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation reports that identify:

- a. All exceedances of the monthly VOC emission limitation of 0.21 ton averaged over a 12-month rolling period.

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitations:

0.04 lb PM10/hr and 0.18 ton PM10/yr

Applicable Compliance Method:

The pound/hour emission limitation was established by multiplying a maximum solids throughput of 0.22 tons/hr by an AP-42 emission factor (Section 6.4 for Paint & Varnish Manufacture) of 20 lbs PM10/ton, and applying collection and control efficiencies of 85% and 99%, respectively. If required, the permittee shall demonstrate compliance with the control efficiency and the lbs PM10/hour emission limitation by testing in accordance with Methods 1-4 of 40 CFR Part 60, Appendix A and Methods 201/201A and 202, of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

If required, the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in



accordance with Methods 1-4 of 40 CFR Part 60, Appendix A, and the following methods as applicable: Method 5 of 40 CFR Part 60, Appendix A, Methods 201/201A and 202, of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

The annual limitation was developed by multiplying the hourly emission limitation by a maximum operating schedule of 8760 hours/year and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual limitation shall also be demonstrated.

b. Emission Limitation:

PM10 emissions (from non-stack egress points) shall not exceed 2.93 tons/year

Applicable Compliance Method:

Compliance with the tons/year emission limitation shall be determined by multiplying a maximum solids throughput of 0.223 tons/hr by an AP-42 emission factor (Section 6.4 for Paint & Varnish Manufacture) of 20 lbs PM10/ton, and applying a minimum control system collection efficiency of 85%.

c. Emission Limitation:

0.21 ton VOC/month averaged over a rolling, 12-month period

Applicable Compliance Method:

The record keeping requirements specified in Section d)(2) of this permit shall be used to determine compliance with the allowable monthly emission limitation averaged over a rolling 12-month period.

g) Miscellaneous Requirements

(1) None.



2. P043, EESW Flare Machines

Operations, Property and/or Equipment Description:

Six EESW Flare Machines (formerly TMP 178534)

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|--|---|
| a. | OAC rule 3745-31-05(A)(3), as effective 11/30/01 | 0.30 ton sulfur dioxide (SO ₂)/month averaged over a rolling 12-month period, for all 6 flare machines combined. See b)(2)a. and b)(2)b. |
| b. | OAC rule 3745-31-05(A)(3), as effective 12/01/06 | See b)(2)c. |
| c. | OAC rule 3745-18-06(E) | Exempt [See b)(2)d.] |

(2) Additional Terms and Conditions

a. The BAT requirements under OAC rule 3745-31-05(A)(3), effective 11/30/01 have been determined to the following:

i. 0.30 ton SO₂/month averaged over a rolling 12-month period from sulfur lubricant operations.

No limitations were established for NO_x, VOC, or PM₁₀ because the emissions of these pollutants are from the combustion of natural gas only and are negligible.

b. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05 (A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutant less than ten tons per year. However, that rule revision has not yet been approved by 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 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits/control measures no longer apply.

- c. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3), as effective December 1, 2006, do not apply to the SO₂ emissions from this air contaminant source since the uncontrolled potential to emit for SO₂ is less than 10 tons/year.

The potential to emit SO₂ is 3.64 tons per year and is the summation of SO₂ emissions from the glass tube flaring operations (3.62 tons per year) and natural gas emissions (0.02 tons per year). The emissions were calculated as follows:

- i. Glass tube flaring: multiplying the maximum material usage rate of 0.822 lb glass lubricant/hr by the emissions factors of 1.0 lb SO₂/lb glass lubricant and 8760 hours/year, and dividing by 2000 lbs/ton (3.62 tons/year);
- ii. Natural gas emissions: multiplying the natural gas usage rate of 0.00709 mmcf/hour by an emissions factor of 0.6 lb/mmcf and by 8760 hours/year, and dividing by 2000 lbs/ton (0.02 ton).

- 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).

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information each month for this emissions unit:
 - a. The company identification for each SO₂-containing material;
 - b. The number of pounds (lbs.) of each SO₂-containing material;
 - c. The SO₂ content of each SO₂-containing material used (in lb/lb.);
 - d. The total SO₂ emissions from each SO₂-containing used [d)(1)b. x d)(1)c.], in lbs.;



- e. Following the first 12 calendar months of operation, the rolling 12-month summation of SO₂ emissions and the average calculated over each rolling 12-month period.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation reports that identify:

- a. All exceedances of the monthly SO₂ emission limitation of 0.30 ton averaged over a 12-month rolling period.

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

0.30 ton SO₂/month averaged over a rolling 12-month period

Applicable Compliance Method:

The record keeping requirements specified in Section d)(1) of this permit shall be used to determine compliance with the allowable monthly emission limitation averaged over a rolling 12-month period.

g) Miscellaneous Requirements

- (1) None.



3. Emissions Unit Group -Basefill Machines: P038 and P039

| EU ID | Operations, Property and/or Equipment Description |
|-------|---|
| P038 | EESW Basefill Machine No. 1 (formerly 178527) |
| P039 | EESW Basefill Machine No. 2 (formerly TMP 178528) |

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) b)(1)c. and d)(1).

b) Applicable Emissions Limitations and/or Control Requirements

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

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|--|--|
| a. | OAC rule 3745-31-05(A)(3), as effective 11/30/01 | See b)(2)a. and b)(2)b. |
| b. | OAC rule 3745-31-05(A)(3), as effective 12/01/06 | See b)(2)c. |
| c. | OAC rule 3745-114 and ORC 3704.03 (F) | See d)(1) |
| d. | OAC rule 3745-21-09(U)(1)(d) | 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)] |

(2) Additional Terms and Conditions

a. The BAT requirements under OAC rule 3745-31-05(A)(3), effective 11/30/01 have been determined be an emission limitation equivalent to the reasonable available control technology (RACT) requirements under OAC rule 3745-21-09(U)(1)(d): 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)].

b. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05 (A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutant less than ten tons per year. However, that rule revision has not yet



been approved by 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 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits/control measures no longer apply.

- c. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3), as effective December 1, 2006, do not apply to the VOC emissions from this air contaminant source since the uncontrolled potential to emit for VOC is less than 10 tons/year.

The uncontrolled PTE for VOC from each emissions unit is 2.67 tons VOC/yr from the basfilling operation and alcohol drip. These emissions were calculated as follows:

- i. VOC emissions from basfilling operations were calculated by multiplying the material usage of 8.25 lbs basfill material/1000 bases by an emissions factor of 0.025 and 8760 hours/year and dividing by 2000 lbs/ton [0.9 tons/year];
- ii. VOC emissions from the alcohol drip were calculated by multiplying the alcohol usage of 0.42 lbs. alcohol/hr by an emissions factor of 0.97 and 8760 hours/year and dividing by 2000 lbs/ton [1.77 tons/year].

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary for this emissions unit because each individual toxic air contaminant, as defined in OAC rule 3745-114-01, from this emissions unit and all emissions units contained in this permit-to-install (PTI) action will be less than 1.0 ton per year combined. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified PTI prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit-to-install.
- (2) When coating metal parts, the permittee shall collect and record the following information each month and maintain the information at the facility for a period of three years, 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.]
- e) Reporting Requirements
 - (1) The permittee shall notify the Northwest District Office in writing of any monthly record showing the use of base cement exceeding 3.5 pounds of volatile organic compounds (VOC) per gallon of coating, excluding water and exempt solvents. The notification shall include a copy of such record and shall be sent to the Northwest District Office within 30 days following the end of the calendar month.
- f) Testing Requirements
 - (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

3.5 pounds of VOC/gallon of coating, excluding water and exempt solvents [for the coatings used for the metal parts (base cement coatings)]

Applicable Compliance Method:

Compliance with the VOC emission limitation above shall be demonstrated based on the monitoring and recordkeeping established in section d)(2) of this permit.
- g) Miscellaneous Requirements
 - (1) None.



4. Emissions Unit Group -Lamp Assembly Lines: P040, P041, and P042

| EU ID | Operations, Property and/or Equipment Description |
|-------|---|
| P040 | EESW Lamp Assembly No. 1 (formerly TMP 178529) |
| P041 | EESW Lamp Assembly No. 2 (formerly TMP 178530) |
| P042 | EESW Lamp Assembly No. 3 (formerly TMP 178531) |

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) b)(1)f., d)(1), d)(2), d)(3), d)(4), and e)(1).

b) Applicable Emissions Limitations and/or Control Requirements

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

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|---|---|
| a. | OAC rule 3745-31-05(F) | <u>Stack Emissions for each emissions unit from E-Coating Application:</u> Particulate matter equal to or less than 10 microns in size (PM10) shall not exceed 0.03 lb/hr and 0.13 ton/year; <u>Non-Stack Egress Emissions for each emissions unit from E-Coating Application:</u> PM10 emissions shall not exceed 0.46 ton/year; See b)(2)a. |
| b. | OAC rule 3745-31-05(A)(3), as effective 11/30/01 | 0.08 ton volatile organic compounds (VOC)/month averaged over a rolling 12-month period, for each line individually. See b)(2)b. |
| c. | OAC rule 3745-31-05(A)(3), as effective 12/01/06 | See b)(2)c. |
| d. | OAC rule 3745-17-11(B) | See b)(2)d. |
| e. | OAC rule 3745-17-07(A) | See b)(2)e. |
| f. | OAC rule 3745-114 and ORC 3704.03 (F)(3)(c) & (F) (4) | See d)(1) |



(2) Additional Terms and Conditions

a. This permit establishes the following voluntary restrictions for the purpose of establishing legally and practically enforceable limitations. These emission limitations are based on the operational restriction contained in c)(1) which requires a dust collector to control particulate matter:

- i. 0.03 lb PM10/hr and 0.13 ton PM10/yr from E-Coating Application at each dust collector stack;

EESW lamp assembly operations involve an e-coat process where emissions of particulate matter are generated and are collected by a capture system (85% collection efficiency). Emissions that are not captured are released and emitted to the atmosphere through non-stack egress points such as building windows, doors, etc. Stack and non-stack emissions of particulate matter are considered to be PM10. The established PM10 limitation does not include emissions generated from the combustion of natural gas due to the level of such emissions being negligible.

b. The BAT requirements under OAC rule 3745-31-05(A)(3), effective 11/30/01 have been determined to the following:

- i. 0.08 ton VOC/month averaged over a 12-month rolling period ; and
- ii. use of a dust collector with a design control efficiency of at least 99% control of captured particulate matter.

No limitations were established for nitrogen oxide or carbon monoxide because the emissions of these pollutants are from the combustion of natural gas only and are negligible.

The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05 (A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutant less than ten tons per year. However, that rule revision has not yet been approved by 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 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits/control measures no longer apply.

It should be noted that the voluntary restrictions established pursuant to OAC rule 3745-31-05(F) were established in part for the purpose of avoiding BAT requirements under OAC rule 3745-31-05(A), as effective 12/01/06 [see b)(2)c.] and will remain applicable after the above SIP revisions are approved by U.S. EPA.



- c. This rule applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3)(a), as effective 12/01/06, do not apply to the PM₁₀ emissions from this air contaminant source since the controlled potential to emit (PTE) is less than 10 tons per year taking into consideration practically and legally enforceable voluntary restrictions established under OAC rule 3745-31-05(F) in this permit. BAT requirements also do not apply to the VOC emissions from this air contaminant source since the uncontrolled potential to emit (PTE) is less than 10 tons per year. The potential to emit for VOC is 0.92 ton per year from each individual lamp processing line and was calculated by the summation of the following:

- i. VOC emissions from combustion were calculated by multiplying the hourly gas usage of 0.001 mmscf by the emissions factor of 7.25 lbs/mmscf and 8760 hours/year and dividing by 2000 lbs/ton [0.04 tons/year];
 - ii. VOC emissions from the base cement baking operations were calculated by multiplying the number of lamps processed/hr (5000) by an emissions factor of 0.03 lbs VOC/1000 lamps and by 8760 hours/year and dividing by 2000 lbs/ton [0.66 tons/year];
 - iii. VOC emissions from monogram ink were calculated by multiplying the number of lamps processed/hr (5000) by an emissions factor of 0.0002 lbs VOC/1000 lamps and by 8760 hours/year and dividing by 2000 lbs/ton [0.005 tons/year];
 - iv. VOC emissions from solder flux were calculated by multiplying the number of lamps processed/hr (5000) by an emissions factor of 0.003 lbs VOC/1000 lamps and by 8760 hours/year and dividing by 2000 lbs/ton [0.06 tons/year];
 - v. VOC emissions from spermofool were calculated by multiplying the number of lamps processed/hr (5000) by an emissions factor of 0.0001 lbs VOC/1000 lamps and by 8760 hours/year and dividing by 2000 lbs/ton [0.002 tons/year];
 - vi. VOC emissions from mineral spirits were calculated by multiplying the number of lamps processed/hr (5000) by an emissions factor of 0.007 lbs VOC/1000 lamps and by 8760 hours/year and dividing by 2000 lbs/ton [0.15 tons/year]
- d. The uncontrolled mass rate of particulate emissions (PE) 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.



- e. 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.
- c) Operational Restrictions
- (1) The following operational restriction has been included in this permit for the purpose of establishing legally and practically enforceable requirements which limit PTE [see b)(2)a.):
 - a. The emissions from the E-Coating Application portion of this emissions unit shall be vented to a dust collector, capable of achieving a control efficiency of 99% for captured particulate matter.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permit-to-install (PTI) application for these emissions units, P040, P041, and P042, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
 - a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
 - b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).



- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., “24” hours per day and “7” days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or “worst case” toxic contaminant(s):

Toxic Contaminant: chromium

TLV (mg/m³): 0.5 (for insoluble Cr III compounds)

Maximum Hourly Emission Rate (lbs/hr): 0.6

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.187

MAGLC (ug/m³): 11.9

Toxic Contaminant: cobalt

TLV (mg/m³): 0.02

Maximum Hourly Emission Rate (lbs/hr): 0.33

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 0.103

MAGLC (ug/m³): 0.476

The permittee, has demonstrated that emissions of chromium and cobalt, from emissions units P040, P041, and P042, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F).

- (2) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV 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 toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" 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 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

- (3) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
 - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
 - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- (4) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.



(5) The permittee shall collect and record the following information each month for all VOC emitted each emissions unit:

- a. The name and identification of each coating, ink, and base cement employed;
- b. The number of lamps processed;
- c. The total VOC emissions from the coatings and inks employed, calculated in accordance with the following equation;

$$\text{VOC emissions (lbs/month)} = (\text{thousand lamps processed/month}) \times (A + B + C + D + E + F)$$

where:

A = emission factor for monogram ink:

0.0002 lbs VOC/1000 lamps;

B = emission factor for solder flux:

0.003 lbs VOC/1000 lamps;

C = emission factor for spermofol:

0.0001 lbs VOC/1000 lamps

D = emission factor for mineral spirits:

0.007 lbs VOC/1000 lamps

E = emission factor for base baking:

0.03 lb/1000 lamps;

- d. Following 12 months of operation, the rolling 12-month summation of VOC emissions and the average calculated over each rolling 12-month period.

e) Reporting Requirements

(1) The permittee shall submit annual reports that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the "Toxic Air Contaminate Statute", ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:

- a. the original model input;
- b. the updated model input;
- c. the reason for the change(s) to the input parameter(s); and



- d. a summary of the results of the updated modeling, including the input changes; and
- e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

(2) The permittee shall submit quarterly deviation reports that identify:

- a. All exceedances of the monthly VOC emission limitation averaged over a 12-month rolling period, of 0.08 ton.

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitations:

0.03 lb PM10/hr and 0.13 ton PM10/yr

Applicable Compliance Method:

The pound/hour emission limitation was established by multiplying a maximum throughput of 5,000 lamps/hr by a site specific emission factor of 0.61 lb PM10/1000 lamps, and applying collection and control efficiencies of 85% and 99%, respectively. If required, the permittee shall demonstrate compliance with the control efficiency and the lbs PM10/hour emission limitation by testing in accordance with Methods 1-4 of 40 CFR Part 60, Appendix A and Methods 201/201A and 202, of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

If required, the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with Methods 1-4 of 40 CFR Part 60, Appendix A, and the following methods as applicable: Method 5 of 40 CFR Part 60, Appendix A, Methods 201/201A and 202, of 40 CFR Part 51, Appendix M. Alternative U.S. EPA



approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

The annual limitation was developed by multiplying the hourly emission limitation by a maximum operating schedule of 8760 hours/year and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual limitation shall also be demonstrated.

b. Emission Limitation:

PM10 emissions (from non-stack egress points) shall not exceed 0.46 tons/year

Applicable Compliance Method:

Compliance with the tons/year emission limitation shall be determined by multiplying a maximum throughput of 5,000 lamps/hr by a site specific emission factor of 0.61 lb PM10/1000 lamps and applying a minimum control system collection efficiency of 85%.

c. Emission Limitation:

0.08 ton VOC/month averaged over a rolling 12-month period, for each line individually

Applicable Compliance Method:

Compliance with the VOC emission limitation above shall be demonstrated based on the monitoring and record keeping established in section d)(5) of this permit.

g) Miscellaneous Requirements

(1) None.