



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL MODIFICATION
HAMILTON COUNTY**

CERTIFIED MAIL

Street Address:

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

Mailing Address:

Lazarus Gov.
Center

Application No: 14-05050

DATE: 5/6/2004

Willard Industries
Paul Thompson
1253 Knowlton Street
Cincinnati, OH 45223

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, Ohio 43215

Sincerely,

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

CC: USEPA

HCDES



**Permit To Install
Terms and Conditions**

**Issue Date: 5/6/2004
Effective Date: 5/6/2004**

FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 14-05050

Application Number: 14-05050
APS Premise Number: 1431070580
Permit Fee: \$0
Name of Facility: Willard Industries
Person to Contact: Paul Thompson
Address: 1253 Knowlton Street
Cincinnati, OH 45223

Location of proposed air contaminant source(s) [emissions unit(s)]:
**1253 Knowlton Street
Cincinnati, Ohio**

Description of proposed emissions unit(s):
Modification of PTI 14-05050.

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described source(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 included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install General Terms and Conditions

1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous

calendar quarters. See B.9 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
- iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

2. Scheduled Maintenance/Malfunction Reporting

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

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

3. Risk Management Plans

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

4. Title IV Provisions

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

5. Severability Clause

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

declared invalid.

6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

7. Fees

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

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are

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

9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

10. Permit To Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

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

12. Air Pollution Nuisance

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

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

1. Compliance Requirements

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

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

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

3. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

4. Termination of Permit To Install

This permit to install shall terminate within eighteen months of the effective date of the permit to install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete

within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

5. Construction of New Sources(s)

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

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

6. Public Disclosure

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

7. Applicability

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

8. Construction Compliance Certification

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

9. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

C. Permit To Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

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

<u>Pollutant</u>	<u>Tons Per Year</u>
PM/	14.89
PM	17.1
10 Organic Compounds	

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Willard Industries

PTI Application: **14-05050**

Modification Issued: 5/6/2004

Facility ID: **1431070580**

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

None

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

None

Applicable Emissions
Limitations/Control
Measures

See term A.I.2.a. for organic compound (OC) emission limitations.

See term A.I.2.b. for the PM/PM-10 emission limitations.

All fugitive dust captured by the ventilation system shall be vented to the baghouse which shall achieve an outlet loading of not greater than 0.030 grain of PM(PE) per dry standard cubic foot of exhaust gases and no visible PM from the baghouse exhaust stack.

The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A), OAC rule 3745-17-07(B), and OAC rule 3745-17-08(B)(3).

See term A.I.2.c.

See term A.I.2.d.

The collection efficiency of the ventilation system shall

be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the points of capture to the extent possible with good engineering design.

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

Modification Issued: 5/6/2004

2. Additional Terms and Conditions

- 2.a** The hourly OC emissions from this emissions unit shall not exceed 16.11 lbs/hr*. The total combined hourly OC emission limitation for emissions units F004, F007, and F008 shall not exceed 16.11 lbs/hr.

The total combined OC emissions from emissions units F004, F007, and F008 shall not exceed 17.1 TPY, based upon a rolling, 12-month summation.

*

The potential to emit for the lost foam pouring (LFP) line (emissions units F004, F007, and F008) is 16.11 lbs/hr. Therefore, the potential to emit for any one of the individual emissions units is assumed to be equivalent to the potential to emit for the entire line. In addition, no hourly record keeping is required to demonstrate compliance with this emission limitation.

- 2.b** The total PE /PM10 emissions (fugitive +stack) from this emissions unit shall not exceed 4.44 TPY, based upon a rolling, 12-month summation.
- 2.c** The visible PE from the stack associated with this emissions unit shall not exceed 20% opacity, as a six-minute average, except as specified by rule.
- 2.d** The visible emissions of fugitive dust from this emissions unit shall not exceed 20% opacity as a three-minute average.
- 2.e** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the use of a baghouse, and the aluminum production limitation.

II. Operational Restrictions

1. The emissions from this emissions unit shall be captured and vented to a baghouse in such a manner as to comply with the PE limitations and visible emission limitations specified in this permit.
2. The maximum annual aluminum pouring rate for this emissions unit shall not exceed 4.5 Million pounds per year, based upon a rolling, 12-month summation of the aluminum pouring rate.
3. The pressure drop across the baghouse shall be maintained within the range of 0.50 to 10 inches of water while the emissions unit is in operation.

Modification Issued: 5/6/2004

4. The maximum hours of operation for this emission unit shall not exceed 4350 hours per year based on a rolling, 12-month summation. The purpose for the hours of operation per year limitation is to ensure compliance with the tons per year of particulate emissions listed in A.I.2.b.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall calculate and maintain the following information each month for emissions units F004, F007 and F008, combined:
 - a. the amount of aluminum poured, recorded in pounds.
 - b. the rolling, 12-month summation for the amount of aluminum poured, recorded in pounds. The rolling 12-month summation shall be calculated by adding the value recorded in line a. for the current months production to the value recorded in line a. for the previous 11-months of operation.
 - c. the total monthly OC emissions, in pounds, calculated by multiplying the total amount of aluminum poured (A), by the company emissions factor of 15.2 lbs of OC/ton of aluminum poured*;

*The lbs of OC/ton of aluminum poured emission factor was based on source-specific testing results performed at Willard Industries on April 25, 2000 and September 13, 2000. See Permit to Install 14-05050 for the derivation of this emission factor.
 - d. the rolling, 12-month OC emissions, in tons. The rolling, 12-month summation shall be calculated by adding the value recorded in line c. for the current months production to the value recorded in line c. for the previous 11-months operation.
2. 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). An audible alarm shall be maintained to notify the permittee of deviations of the baghouse pressure drop range specified in term A.II.3 while this emissions unit is in operation. An inter-lock system shall be installed that discontinues the lost foam pouring operation during periods of time when the baghouse is operating outside the pressure drop range specified in term A.II.3.
3. The permittee shall perform an inspection of the collection and control system on a weekly basis. The purpose of this inspection is to ensure its proper functioning. At a minimum this inspection

Emissions Unit ID: F004

shall include a visible check of the hood and duct systems leading to the baghouse, the presence of excessive fugitive visible emissions , and a check for the presence of visible emissions from the stack associated with this emissions unit. The results of this inspection shall be recorded in a log book. Any problems noted during the inspection and the corrective action to remedy the problem should also be noted in the log book.

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4. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions at the point of egress serving this emission unit. The presence or absence of any visible fugitive 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the weekly check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emission unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

5. 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. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.
6. The permittee shall collect and record the following information on a monthly basis for emission unit F004:
 - a. the total hours of operation during the month; and
 - b. the rolling, 12-month summation for the hours of operation for this emission unit. The rolling, 12-month summation shall be calculated by adding the value recorded in line a. for

Emissions Unit ID: F004

the current months production to the value recorded in line a. for the previous 11-months operation.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identifies the following information:
 - a. any exceedance of the rolling, 12-month aluminum pouring limitation of 4.5 million pounds;
 - b. all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified in term A.II.3;
 - c. any exceedance of the rolling, 12-month OC emission limitation of 17.1 tons (for emission units F004, F007 and F008, combined);
 - d. any week during which the inspection of the collection and control system does not take place and the reason for not performing the inspection; and
 - e. any exceedance of the hours of operation restriction of 4350 hours per year based on a rolling, 12-month summation.
2. The permittee shall submit annual reports which specify the total, combined, OC emissions from emissions units F004, F007 and F008. These reports shall be submitted by January 31 of each year and cover the previous calendar year.
3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive particulate emissions were observed at the point of egress serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.
4. The permittee shall submit semiannual 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. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.
5. The deviation reports shall be submitted in accordance with the reporting requirements specified in Part I- General Term and Condition A.1.c.ii.

V. Testing Requirements

1. Compliance with the emission limitations and the material/operational restrictions specified in

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Willard

PTI A₁

Emissions Unit ID: F004

Modification Issued: 5/6/2004

Sections A.I.1 and A.II of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:
16.11 lbs of OC/hour from this emissions unit and 16.11 lbs of OC/hour for emissions units F004, F007 and F008 combined.

Modification Issued: 5/6/2004

Applicable Compliance Method:

Compliance with the hourly allowable OC emission limitation is demonstrated based upon the emissions unit's potential to emit as described in A.I.2.a of this permit (see PTI 14-05050 for the detailed calculation of the potential to emit).

Additionally, compliance with the lbs of OC/hr emission limitation was demonstrated during stack testing conducted at Willard Industries on April 25, 2000 and September 13, 2000.

If required, compliance with the hourly OC emission limitation shall be demonstrated by stack testing conducted in accordance with Methods 18 - 25, or 25A of 40 CFR, Part 60, Appendix A.

1.b Emission Limitations:

17.1 TPY of OC from F004, F007, and F008 combined

Applicable Compliance Method:

Compliance with the hourly and annual allowable OC emission limitations shall be demonstrated based on the record keeping requirements established in section A.III of this permit.

1.c Emission Limitations:

0.030 grain of PE per dry standard cubic foot (gr/dscf) of exhaust gases, from the baghouse controlling this emission unit and 4.44 TPY PE/PM₁₀

Applicable Compliance Method:

Compliance with the annual PE limitation may be determined by multiplying the grain loading limitation* of 0.030 gr PE/dscf by the maximum exhaust gas flow rate from the baghouse (dscf/minute), and by 60 min/hr, and by 4350 hrs/yr, and divide by 7000 gr/lb, and then divide by 2000 lbs/ton.

Additionally, compliance with the gr/dscf emission limitation was demonstrated during a stack test conducted on 1/16/02 when an emission rate of 0.0022 gr/dscf was determined.

Also, during the 1/16/02 stack test an emission rate of 0.63 lb PE/hr was determined. This hourly emission rate multiplied by the hours of operation recorded in A.III.5. divided by 2000 lbs/ton may be used to demonstrate compliance with the TPY emission limitation.

If required, compliance with the grain loading emission limitation shall be demonstrated by stack testing conducted in accordance with Methods 1 - 5 of 40 CFR, Part 60, Appendix A.

1.d Emission Limitation:

Visible PE shall not exceed 20% opacity, as a six-minute average, except as specified by rule.

Willard Industries
PTI Application: 14-05050
Modif

Facility ID: 1431070580

Emissions Unit ID: F004

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

Modification Issued: 5/6/2004

- 1.e Emission Limitation:
Visible emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with 40 CFR, Part 60, Method 9 and the procedures in OAC rule 3745-17-03(B)(3).

The Method 9 readings to determine compliance with the fugitive visible particulate emission limitation shall be taken at the points of egress to the atmosphere.

- 1.f Material Usage Limitation:
Maximum annual aluminum pouring rate for this emissions unit shall not exceed 4.5 million pounds per year, based upon a rolling, 12-month summation of the aluminum pouring rate

Applicable Compliance Method:

Compliance with the usage limitation above shall be based on the record keeping requirements established in section A.III of the terms and conditions of this permit.

- 1.g Hours of operation restriction:
maximum hours of operation for this emissions unit shall not exceed 4350 hours per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the hours of operation restriction above shall be based on the record keeping requirements established in section A.III of the terms and conditions of this permit.

VI. Miscellaneous Requirements

1. Emissions units F004, F007, F008, F013, F015, and F016 are vented to a common baghouse.

Modification Issued: 5/6/2004

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F004 - LFP aluminum pouring w/baghouse		

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for this emissions unit F004 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the ISCST3 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Benzene
 TLV (ug/m3): 1594
 Maximum Hourly Emission Rate (lbs/hr): 0.1

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Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.3

MAGLC (ug/m3): 38

Pollutant: Ethylbenzene

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TLV (ug/m3): 433,306
Maximum Hourly Emission Rate (lbs/hr): 2.17
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 49
MAGLC (ug/m3): 10,317

Pollutant: Methylstyrene
TLV (ug/m3): 241,184
Maximum Hourly Emission Rate (lbs/hr): 0.77
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 17
MAGLC (ug/m3): 5742

Pollutant: Styrene
TLV (ug/m3): 85,200
Maximum Hourly Emission Rate (lbs/hr): 11.4
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 258
MAGLC (ug/m3): 2029

Pollutant: Toluene
TLV (ug/m3): 188,020
Maximum Hourly Emission Rate (lbs/hr): 0.73
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 17
MAGLC (ug/m3): 4477

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

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled: and

- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

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

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will 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 the 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 - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
F007 - LFP sand shakeout w/baghouse - Modification	OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-08(B)(3)
		OAC rule 3745-17-11(B)(1)
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-17-07(B)(1)	

Applicable Emissions
Limitations/Control
Measures

See term A.I.2.a. for organic compound (OC) emission limitations.

See term A.I.2.b. for the particulate emissions (PE)/PM-10 emission limitations.

All fugitive dust captured by the ventilation system shall be vented to the baghouse which shall achieve an outlet loading of not greater than 0.030 grain of PM(PE) per dry standard cubic foot of exhaust gases and no visible PM from the baghouse exhaust stack.

The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), OAC rule 3745-17-07(B), and OAC rule 3745-17-08(B)(3).

See term A.I.2.c.

See term A.I.2.d.

The collection efficiency of the ventilation system shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point of capture to the extent possible with good engineering design.

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

Modification Issued: 5/6/2004**2. Additional Terms and Conditions**

- 2.a** The hourly OC emissions from this emissions unit shall not exceed 16.11 lbs/hr*. The total combined hourly OC emission limitation for emissions units F004, F007, and F008 shall not exceed 16.11 lbs/hr.

The total combined OC emissions from emissions units F004, F007, and F008 shall not exceed 17.1 TPY, based upon a rolling, 12-month summation.

* The potential to emit for the lost foam pouring (LFP) line (emissions units F004, F007, and F008) is 16.11 lbs/hr. Therefore, the potential to emit for any one of the individual emissions units is assumed to be equivalent to the potential to emit for the entire line. In addition, no hourly record keeping is required to demonstrate compliance with this emission limitation.

- 2.b** The total PE/PM10 emissions (fugitive + stack) from this emissions unit shall not exceed 2.21 tons/yr, based upon a rolling, 12-month summation.

The baghouse used to control PE from this emissions unit shall achieve an outlet emission rate of not greater than .030 grain of particulate emissions per dry standard cubic foot of exhaust gases.

- 2.c** The visible PE from the stack associated with this emissions unit shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

- 2.d** The visible emissions of fugitive dust from this emissions unit shall not exceed 20% opacity as a three-minute average.

- 2.e** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the use of a baghouse and aluminum production limitation.

II. Operational Restrictions

1. The emissions from this emissions unit shall be captured and vented to a baghouse in such a manner as to comply with the PE limitations and visible emission limitations specified in this permit.
2. The maximum annual aluminum pouring rate for this emissions unit shall not exceed 4.5 Million pounds per year, based on a rolling, 12-month summation of the monthly aluminum pouring rates.

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3. The pressure drop across the baghouse shall be maintained within the range of 0.5 to 10 inches of water while the emissions unit is in operation.
4. The maximum hours of operation for this emission unit shall not exceed 4350 hours per year based on a rolling, 12-month summation. The purpose for the hours of operation per year limitation is to ensure compliance with the tons per year of particulate emissions listed in A.I.2.b.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall calculate and maintain the following information each month for emissions units F004, F007 and F008, combined:
 - a. the amount of aluminum poured, recorded in pounds.
 - b. the rolling, 12-month summation for the amount of aluminum poured, recorded in pounds. The rolling, 12-month summation shall be calculated by adding the value recorded in line a. for the current months production to the value recorded in line a. for the previous 11-months operation.
 - c. the total monthly OC emissions, in pounds, calculated by multiplying the total amount of aluminum poured (a), by the company emissions factor of 15.2 lb of OC/ton of aluminum poured*;
 - d. the rolling, 12-month OC emissions, in tons. The rolling, 12-month summation shall be calculated by adding the value recorded in line c. for the current months production to the value recorded in line c. for the previous 11-months operation.

*The lbs of OC/ton of aluminum poured emission factor was based on source-specific testing results performed at Willard Industries on April 25, 2000 and September 13, 2000. See Permit to Install 14-05050 for the derivation of this emission factor.

2. The permittee shall properly 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). An audible alarm shall be maintained to notify the permittee of deviations of the baghouse pressure drop range specified in term A.II.3 while this emissions unit is in operation. An inter-lock system shall be installed that discontinues the lost foam pouring operation during periods of time when the baghouse is operating outside the pressure drop range specified in term A.II.3.

Emissions Unit ID: F007

3. The permittee shall perform an inspection of the collection and control system on a weekly basis . The purpose of this inspection is to ensure its proper functioning. At a minimum this inspection shall include a visible check of the hood and duct systems leading to the baghouse, the presence of excessive fugitive visible emissions , and a check for the presence of visible emissions from the stack associated with this emissions unit. The results of this inspection shall be recorded in a log book. Any problems noted during the inspection and the corrective action to remedy the problem should also be noted in the log book.
4. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions at the point of egress serving this emissions unit. The presence or absence of any visible fugitive 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the weekly check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

5. 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. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.
6. The permittee shall collect and record the following information on a monthly basis for emissions unit F007:
 - a. the total hours of operation during the month; and

Emissions Unit ID: F007

- b. the rolling, 12-month summation for the hours of operation for this emission unit. The rolling, 12-month summation shall be calculated by adding the value recorded in line a. for the current months production to the value recorded in line a. for the previous 11-months operation.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identifies the following information:
 - a. any exceedance of the rolling, 12-month aluminum pouring limitation of 4.5 million pounds;
 - b. all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified in term A.II.3;
 - c. any exceedance of the rolling, 12-month OC emission limitation of 17.1 tons (for emission units F004, F007 and F008, combined);
 - d. any week during which the inspection of the collection and control system does not take place and the reason for not performing the inspection; and
 - e. any exceedance of the hours of operation restriction of 4350 hours per year based on a rolling, 12-month summation.
2. The permittee shall submit annual reports which specify the total, combined, OC emissions from emission units F004, F007 and F008.

These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive particulate emissions were observed at the point of egress serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.
4. The permittee shall submit semiannual 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. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.
5. The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I-General Term and Condition A.1.c.ii.

V. Testing Requirements

1. Compliance with the emission limitations and the material/operational restrictions specified in Sections A.I.1 and A.II of these terms and conditions shall be determined in accordance with the following methods:
 - 1.a Emission Limitation:
16.11 lbs of OC/hour from this emissions unit

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Applicable Compliance Method:

Compliance with the hourly allowable OC emission limitation is demonstrated based upon the emissions unit's potential to emit as described in A.I.2.a of this permit (see PTI 14-05050 for the detailed calculation of the potential to emit).

Additionally, compliance with the lbs of OC/hr emission limitation was demonstrated during stack testing conducted at Willard Industries on April 25, 2000 and September 13, 2000.

If required, compliance with the hourly OC emission limitation shall be demonstrated by stack testing conducted in accordance with Methods 18 - 25, or 25A of 40 CFR, Part 60, Appendix A.

1.b Emission Limitations:

17.1 TPY of OC from F004, F007, and F008 combined

Applicable Compliance Method:

Compliance with the hourly and annual allowable OC emission limitations shall be demonstrated based on the record keeping requirements established in section A.III of this permit.

1.c Emission Limitations:

0.030 grain of PE per dry standard cubic foot (gr/dscf) of exhaust gases, from the baghouse controlling this emission unit and 2.21 TPY PE/PM₁₀

Applicable Compliance Method:

Compliance with the annual PE limitation may be determined by multiplying the grain loading limitation* of 0.030 gr PE/dscf by the maximum exhaust gas flow rate from the baghouse (dscf/minute), and by 60 min/hr, and by 4350 hrs/yr, and divide by 7000 gr/lb, and then divide by 2000 lbs/ton.

Additionally, compliance with the gr/dscf emission limitation was demonstrated during a stack test conducted on 1/16/02 when an emission rate of 0.0022 gr/dscf was determined.

Also, during the 1/16/02 stack test an emission rate of 0.63 lb PE/hr was determined. This hourly emission rate multiplied by the hours of operation recorded in A.III.5. divided by 2000 lbs/ton may be used to demonstrate compliance with the TPY emission limitation.

If required, compliance with the grain loading emission limitation shall be demonstrated by stack testing conducted in accordance with Methods 1 - 5 of 40 CFR, Part 60, Appendix A.

1.d Emission Limitation:

Visible PE shall not exceed 20% opacity, as a six-minute average, except as specified by rule.

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Facility ID: 1431070580

Emissions Unit ID: F007

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

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1.e Emission Limitation:

Visible emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with 40 CFR, Part 60, Method 9 and the procedures in OAC rule 3745-17-03(B)(3).

The Method 9 readings to determine compliance with the fugitive visible particulate emission limitation shall be taken at the points of egress to the atmosphere.

1.f Material Usage Limitation:

Maximum annual aluminum pouring rate for this emissions unit shall not exceed 4.5 million pounds per year, based upon a rolling, 12-month summation of the aluminum pouring rate

Applicable Compliance Method:

Compliance with the usage limitation above shall be based on the record keeping requirements established in section A.III of the terms and conditions of this permit.

1.g Hours of operation restriction:

Maximum hours of operation for this emissions unit shall not exceed 4350 hours per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the hours of operation restriction above shall be based on the record keeping requirements established in section A.III of the terms and conditions of this permit.

VI. Miscellaneous Requirements

1. Emissions units F004, F007, F008, F013, F015, and F016 are vented to a common baghouse.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment F007 - LFP sand shakeout w/baghouse	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>

2. Additional Terms and Conditions

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for this emissions unit F007 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the ISCST3 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Benzene

TLV (ug/m3): 1594

Maximum Hourly Emission Rate (lbs/hr): 0.1

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.3

MAGLC (ug/m3): 38

Pollutant: Ethylbenzene

TLV (ug/m3): 433,306

Maximum Hourly Emission Rate (lbs/hr): 2.17

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 49

MAGLC (ug/m3): 10,317

Pollutant: Methylstyrene

TLV (ug/m3): 241,184

Maximum Hourly Emission Rate (lbs/hr): 0.77

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 17

MAGLC (ug/m3): 5742

Pollutant: Styrene

TLV (ug/m3): 85,200

Maximum Hourly Emission Rate (lbs/hr): 11.4

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 258

MAGLC (ug/m3): 2029

Pollutant: Toluene

TLV (ug/m3): 188,020

Maximum Hourly Emission Rate (lbs/hr): 0.73

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 17

MAGLC (ug/m3): 4477

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

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

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exhaust flow, changes in stack height, changes in stack diameter, etc.).

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

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will 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 the 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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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
F008 - LFP sand handling process w/baghouse - Modification	OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-08(B)(3)
		OAC rule 3745-17-11(B)
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-17-07(B)(1)	

Applicable Emissions
Limitations/Control
Measures

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

See term A.I.2.a. for organic compound (OC) emission limitations.

See term A.I.2.b. for the particulate emissions (PE)/PM-10 emission limitations.

All fugitive dust captured by the ventilation system shall be vented to the baghouse which shall achieve an outlet loading of not greater than 0.030 grain of PM(PE) per dry standard cubic foot of exhaust gases and no visible PM from the baghouse exhaust stack.

The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), OAC rule 3745-17-07(B), and OAC rule 3745-17-08(B)(3).

See term A.I.2.c.

See term A.I.2.d.

The collection efficiency of the ventilation system shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point of capture to the extent possible with good engineering design.

The emission limitation

Modification Issued: 5/6/2004**2. Additional Terms and Conditions**

- 2.a** The hourly OC emissions from this emissions unit shall not exceed 16.11 lbs/hr*. The total combined hourly OC emission limitation for emissions units F004, F007, and F008 shall not exceed 16.11 lbs/hr.

The total combined OC emissions from emissions units F004, F007, and F008 shall not exceed 17.1 TPY, based upon a rolling, 12-month summation.

* The potential to emit for the lost foam pouring (LFP) line (emissions units F004, F007, and F008) is 16.11 lbs/hr. Therefore, the potential to emit for any one of the individual emissions units is assumed to be equivalent to the potential to emit for the entire line. In addition, no hourly record keeping is required to demonstrate compliance with this emission limitation.

- 2.b** The total PE/PM10 emissions (fugitive + stack) from this emissions unit shall not exceed 8.24 tons/yr, based upon a rolling, 12-month summation.

The baghouse used to control PE from this emissions unit shall achieve an outlet emission rate of not greater than .030 grain of particulate emissions per dry standard cubic foot of exhaust gases.

- 2.c** The visible PE from the stack associated with this emissions unit shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

- 2.d** The visible of fugitive dust from this emissions unit shall not exceed 20% opacity as a three-minute average.

- 2.e** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the use of a baghouse and the . aluminum pouring limitation.

II. Operational Restrictions

1. The emissions from this emissions unit shall be captured and vented to a baghouse in such a manner as to comply with the PE limitations and visible emission limitations specified in this permit.
2. The maximum annual aluminum pouring rate for this emissions unit shall not exceed 4.5 Million pounds per year, based on a rolling, 12-month summation of the monthly aluminum pouring rates.

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3. The pressure drop across the baghouse shall be maintained within the range of 0.50 to 10 inches of water while the emissions unit is in operation.
4. The maximum hours of operation for this emission unit shall not exceed 4350 hours per year based on a rolling, 12-month summation. The purpose for the hours of operation per year limitation is to ensure compliance with the tons per year of particulate emissions listed in A.I.2.b.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall calculate and maintain the following information each month for emissions units F004, F007 and F008, combined:
 - a. the amount of aluminum poured, recorded in pounds.
 - b. the rolling, 12-month summation for the amount of aluminum poured, recorded in pounds. The rolling, 12-month summation shall be calculated by adding the value recorded in line a. for the current months production to the value recorded in line a. for the previous 11-months operation.
 - c. the total monthly OC emissions, in pounds, calculated by multiplying the total amount of aluminum poured (a), by the company emissions factor of 15.2 lb of OC/ton of aluminum poured*;
 - d. the rolling, 12-month OC emissions, in tons. The rolling, 12-month summation shall be calculated by adding the value recorded in line c. for the current months production to the value recorded in line c. for the previous 11-months operation.

*The lbs of OC/ton of aluminum poured emission factor was based on source-specific testing results performed at Willard Industries on April 25, 2000 and September 13, 2000. See Permit to Install 14-05050 for the derivation of this emission factor.

2. 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). An audible alarm shall be maintained to notify the permittee of deviations of the baghouse pressure drop range specified in term A.II.3 while this emissions unit is in operation. An inter-lock system shall be installed that discontinues the lost foam pouring operation during periods of time when the baghouse is operating outside the pressure drop range specified in term A.II.3.

Emissions Unit ID: F008

3. The permittee shall perform an inspection of the collection and control system on a weekly basis. The purpose of this inspection is to ensure its proper functioning. At a minimum this inspection shall include a visible check of the hood and duct systems leading to the baghouse, the presence of excessive fugitive visible emissions, and a check for the presence of visible emissions from the stack associated with this emissions unit. The results of this inspection shall be recorded in a log book. Any problems noted during the inspection and the corrective action to remedy the problem should also be noted in the log book.
4. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions at the point of egress serving this emissions unit. The presence or absence of any visible fugitive 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the weekly check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

5. 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. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.
6. The permittee shall collect and record the following information on a monthly basis for emissions unit F008:
 - a. the total hours of operation during the month; and

- b. the rolling, 12-month summation for the hours of operation for this emission unit. The rolling, 12-month summation shall be calculated by adding the value recorded in line a. for the current months production to the value recorded in line a. for the previous 11-months operation.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identifies the following information:
 - a. any exceedance of the rolling, 12-month aluminum pouring limitation of 4.5 million pounds;
 - b. all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified in term A.II.3;
 - c. any exceedance of the rolling, 12-month OC emission limitation of 17.1 tons (for emission units F004, F007 and F008, combined);
 - d. any week during which the inspection of the collection and control system does not take place and the reason for not performing the inspection; and
 - e. any exceedance of the hours of operation restriction of 4350 hours per year based on a rolling, 12-month summation.

2. The permittee shall submit annual reports which specify the total, combined, OC emissions from emission units F004, F007 and F008.

These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive particulate emissions were observed at the point of egress serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.
4. The permittee shall submit semiannual 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. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.
5. The quarterly deviation reports shall be submitted in accordance with the reporting requirements

specified in Part I-General Term and Condition A.1.c.ii.

V. Testing Requirements

1. Compliance with the emission limitations and the material/operational restrictions specified in Sections A.I.1 and A.II of these terms and conditions shall be determined in accordance with the following methods:
 - 1.a Emission Limitation:
16.11 lbs of OC/hour from this emissions unit

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Applicable Compliance Method:

Compliance with the hourly allowable OC emission limitation is demonstrated based upon the emissions unit's potential to emit as described in A.I.2.a of this permit (see PTI 14-05050 for the detailed calculation of the potential to emit).

Additionally, compliance with the lbs of OC/hr emission limitation was demonstrated during stack testing conducted at Willard Industries on April 25, 2000 and September 13, 2000.

If required, compliance with the hourly OC emission limitation shall be demonstrated by stack testing conducted in accordance with Methods 18 - 25, or 25A of 40 CFR, Part 60, Appendix A.

1.b Emission Limitations:

17.1 TPY of OC from F004, F007, and F008 combined

Applicable Compliance Method:

Compliance with the hourly and annual allowable OC emission limitations shall be demonstrated based on the record keeping requirements established in section A.III of this permit.

1.c Emission Limitations:

0.030 grain of PE per dry standard cubic foot (gr/dscf) of exhaust gases, from the baghouse controlling this emission unit and 8.24 TPY PE/PM₁₀

Applicable Compliance Method:

Compliance with the annual PE limitation may be determined by multiplying the grain loading limitation* of 0.030 gr PE/dscf by the maximum exhaust gas flow rate from the baghouse (dscf/minute), and by 60 min/hr, and by 4350 hrs/yr, and divide by 7000 gr/lb, and then divide by 2000 lbs/ton.

Additionally, compliance with the gr/dscf emission limitation was demonstrated during a stack test conducted on 1/16/02 when an emission rate of 0.0022 gr/dscf was determined.

Also, during the 1/16/02 stack test an emission rate of 0.63 lb PE/hr was determined. This hourly emission rate multiplied by the hours of operation recorded in A.III.5. divided by 2000 lbs/ton may be used to demonstrate compliance with the TPY emission limitation.

If required, compliance with the grain loading emission limitation shall be demonstrated by stack testing conducted in accordance with Methods 1 - 5 of 40 CFR, Part 60, Appendix A.

1.d Emission Limitation:

Visible PE shall not exceed 20% opacity, as a six-minute average, except as specified by rule.

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Facility ID: **1431070580**

Emissions Unit ID: F008

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1).

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1.e Emission Limitation:

Visible emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with 40 CFR, Part 60, Method 9 and the procedures in OAC rule 3745-17-03(B)(3).

The Method 9 readings to determine compliance with the fugitive visible particulate emission limitation shall be taken at the points of egress to the atmosphere.

1.f Material Usage Limitation:

Maximum annual aluminum pouring rate for this emissions unit shall not exceed 4.5 million pounds per year, based upon a rolling, 12-month summation of the aluminum pouring rate

Applicable Compliance Method:

Compliance with the usage limitation above shall be based on the record keeping requirements established in section A.III of the terms and conditions of this permit.

1.g Hours of operation restriction:

Maximum hours of operation for this emissions unit shall not exceed 4350 hours per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the hours of operation restriction above shall be based on the record keeping requirements established in section A.III of the terms and conditions of this permit.

VI. Miscellaneous Requirements

1. Emissions units F004, F007, F008, F013, F015, and F016 are vented to a common baghouse.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F008 - LFP sand handling process w/baghouse		

2. Additional Terms and Conditions

2.a

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for this emissions unit F008 was evaluated based on the actual materials(typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the ISCST3 model(or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the ISCST3 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Benzene
 TLV (ug/m3): 1594
 Maximum Hourly Emission Rate (lbs/hr): 0.1

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Emissions Unit ID: F008

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2.3

MAGLC (ug/m3): 38

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Pollutant: Ethylbenzene

TLV (ug/m3): 433,306

Maximum Hourly Emission Rate (lbs/hr): 2.17

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 49

MAGLC (ug/m3): 10,317

Pollutant: Methylstyrene

TLV (ug/m3): 241,184

Maximum Hourly Emission Rate (lbs/hr): 0.77

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 17

MAGLC (ug/m3): 5742

Pollutant: Styrene

TLV (ug/m3): 85,200

Maximum Hourly Emission Rate (lbs/hr): 11.4

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 258

MAGLC (ug/m3): 2029

Pollutant: Toluene

TLV (ug/m3): 188,020

Maximum Hourly Emission Rate (lbs/hr): 0.73

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 17

MAGLC (ug/m3): 4477

Physical changes to or 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 Toxics Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in

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

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will 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 the 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