

Certified Mail Number: 7007 0710 0005 3965 6831



DATE: April 23, 2008

TO: Interested Parties / Applicant

RE: Klinge Enameling, Inc. / R097-25720-00238

FROM: Timothy J. Method
Environmental Coordinator

Notice of Decision: Approval - Registration

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 501, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Indianapolis Office of Environmental Services, Air Permits at (317) 327-2234.

Enclosures



Air Quality Hotline: 317-327-4AIR | knozone.com

Department of Public Works
Office of Environmental Services

2700 Belmont Avenue
Indianapolis, IN 46221

317-327-2234
Fax 327-2274
TDD 327-5186
indygov.org/dpw



REGISTRATION

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY and INDIANAPOLIS OFFICE OF ENVIRONMENTAL SERVICES

**Klinge Enameling, Inc.
5001 E. Prospect Street
Indianapolis, Indiana 46203**

Pursuant to 326 IAC 2-5.1 (Construction of New Sources: Registrations) and 326 IAC 2-5.5 (Registrations), Klinge Enameling, Inc. (herein known as the Registrant) is hereby authorized to construct and operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this registration.

Registration No. R097-25720-00238	
Issued by:	Issuance Date: April 23, 2008
Original Signed by	
Timothy J. Method Environmental Coordinator, DPW	



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2700 Belmont Avenue
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SECTION A

SOURCE SUMMARY

This registration is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ), and Indianapolis Office of Environmental Services (OES). The information describing the source contained in conditions A.1 and A.2 is descriptive information and does not constitute enforceable conditions. However, the Registrant should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Registrant to obtain additional permits pursuant to 326 IAC 2.

A.1 General Information

The Registrant owns and operates a stationary specialty coatings operation.

Source Address:	5001 E. Prospect Street, Indianapolis, Indiana 46203
Mailing Address:	PO Box 406, Beech Grove, Indiana 46107
General Source Phone Number:	(317) 359-8291
SIC Code:	3721
County Location:	Marion County
Source Location Status:	Nonattainment for PM 2.5 standard Attainment for all other criteria pollutants
Source Status:	Registration

A.2 Emission Units and Pollution Control Equipment Summary

This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) spray paint booth, identified as PB #1, constructed in 1991, utilizing one (1) low pressure electrostatic air atomized spray gun, with a maximum surface coating capacity of 0.01 gallons of coatings per metal unit and 1.17 metal units per hour. Emissions are controlled by dry filters and exhausts at stack PB #1. Under 40 CFR 63.11169, Subpart HHHHHH, emission unit PB #1 is considered an affected facility. [40 CFR Part 63, Subpart HHHHHH]
- (b) One (1) spray paint booth, identified as PB #2, constructed in 1991, utilizing one (1) low pressure electrostatic air atomized spray gun, with a maximum surface coating capacity of 0.04 gallons of coatings per metal unit and 1.17 metal units per hour. Emissions are controlled by dry filters and exhausts at stack PB #2. Under 40 CFR 63.11169, Subpart HHHHHH, emission unit PB #2 is considered an affected facility. [40 CFR Part 63, Subpart HHHHHH]
- (c) One (1) spray paint booth, identified as PB #3, constructed in 1991, utilizing one (1) low pressure electrostatic air atomized spray gun, with a maximum surface coating capacity of 0.01 gallons of coatings per metal unit and 8.25 metal units per hour. Emissions are controlled by dry filters and exhausts at stack PB #3. Under 40 CFR 63.11169, Subpart HHHHHH, emission unit PB #3 is considered an affected facility. [40 CFR Part 63, Subpart HHHHHH]
- (d) One (1) spray paint booth, identified as PB #4, constructed in 1991, utilizing one (1) low pressure electrostatic air atomized spray gun, with a maximum surface coating capacity of 0.01 gallons of coatings per metal unit and 0.42 metal units per hour. Emissions are controlled by dry filters and exhausts at stack PB #4. Under 40 CFR 63.11169, Subpart HHHHHH, emission unit PB #4 is considered an affected facility. [40 CFR Part 63, Subpart HHHHHH]
- (e) Two (2) blasting machines, identified as SB #1 and SB #2, constructed in 1991, utilizing aluminum oxides as the blasting media and consisting of 1/4 inch blasting nozzle operating at thirty (30) pounds per square inch pressure. The maximum hourly blasting

media process rate is 0.09 tons per hour for each machine. Emissions are controlled by a baghouse and exhaust indoors.

- (f) One (1) blasting machine, identified as SB #3, constructed in 1991, utilizing glass beads as the blasting media and consisting of 1/4 inch blasting nozzle operating at thirty (30) pounds per square inch pressure. The maximum hourly blasting media process rate is 0.06 tons per hour. Emissions are controlled by a baghouse and exhaust indoors.
- (g) One (1) blasting machine, identified as SB #4, constructed in 1991, utilizing urea as the blasting media and consisting of 1/4 inch blasting nozzle operating at thirty (30) pounds per square inch pressure. The maximum hourly blasting media process rate is 0.027 tons per hour. Emissions are controlled by a baghouse and exhaust indoors.
- (h) Two (2) natural gas curing ovens, identified as OV-1 and OV-2, constructed in 1990, with a maximum heat capacity of 0.97 MMBtu/hr and 1.0 MMBth/hr, exhausting to stacks ID OV-1 and OV-2 respectively.
- (i) Eleven (11) natural gas space heaters, with a total maximum heat input capacity of 2.03 MMBtu/hr, constructed at various times from 1990 to 2004.

SECTION B

GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

Terms in this registration shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-1.1-1) shall prevail.

B.2 Effective Date of Registration [IC 13-15-5-3]

Pursuant to IC 13-15-5-3, this registration is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

B.3 Registration Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation), this registration to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this registration.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this registration.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this registration shall not require revocation of this registration.
- (d) For any cause which establishes in the judgment of IDEM and OES, the fact that continuance of this registration is not consistent with purposes of this article.

B.4 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to Registration No. 097-25720-00238 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this registration.

B.5 Annual Notification [326 IAC 2-5.1-2(f)(3)] [326 IAC 2-5.5-4(a)(3)]

Pursuant to 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3):

- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this registration.
- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204-2251

and

Indianapolis Office of Environmental Services
Air Compliance
2700 South Belmont Avenue
Indianapolis, IN 46221

- (c) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and OES on or before the date it is due.

B.6 Source Modification Requirement [326 IAC 2-5.5-6(a)]

Pursuant to 326 IAC 2-5.5-6(a), an application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) and OES if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

B.7 Registrations [326 IAC 2-5.1-2(i)]

Pursuant to 326 IAC 2-5.1-2(i), this registration does not limit the source's potential to emit.

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]

C.1 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this registration:

- (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.2 Fugitive Dust Emissions [326 IAC 6-4]

The Registrant shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

SECTION D.1

OPERATION CONDITIONS

Facility Description [326 IAC 2-5.1-2(f)(2)] [326 IAC 2-5.5-4(a)(2)]:

(e) Two (2) blasting machines, identified as SB #1 and SB #2, constructed in 1991, utilizing aluminum oxides as the blasting media and consisting of 1/4 inch blasting nozzle operating at thirty (30) pounds per square inch pressure. The maximum hourly blasting media process rate is 0.09 tons per hour for each machine. Emissions are controlled by a baghouse and exhaust indoors.

(f) One (1) blasting machine, identified as SB #3, constructed in 1991, utilizing glass beads as the blasting media and consisting of 1/4 inch blasting nozzle operating at thirty (30) pounds per square inch pressure. The maximum hourly blasting media process rate is 0.06 tons per hour. Emissions are controlled by a baghouse and exhaust indoors.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-5.1-2(f)(1)] [326 IAC 2-5.5-4(a)(1)]

D.1.1 Particulate Emissions Limitations for Manufacturing Processes [326 IAC 6-3]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the emission units listed in the table below shall not exceed the emission rate calculated using the following equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour;
 and P = process weight rate in tons per hour

The following table sets forth the maximum process weight rate for specific emission units and the allowable rate of emissions calculated for that process weight rate.

Emission Unit	P = Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)
Blasting machine, SB #1	0.09	0.82
Blasting machine, SB #2	0.09	0.82
Blasting machine, SB #3	0.06	0.62

Compliance Determination Requirements [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]

D.1.2 Particulate Matter

In order to comply with permit condition D.1.1, the baghouses associated with emission units SB #1, SB #2, and SB #3 shall be in operation at all times SB #1, SB #2, and SB #3 are in operation.

SECTION E.1 FACILITY OPERATION CONDITIONS

Facility Description 326 IAC 2-5.1-2(f)(2)] [326 IAC 2-5.5-4(a)(2)]:

- (a) One (1) spray paint booth, identified as PB #1, constructed in 1991, utilizing one (1) low pressure electrostatic air atomized spray gun, with a maximum surface coating capacity of 0.01 gallons of coatings per metal unit and 1.17 metal units per hour. Emissions are controlled by dry filters and exhausts at stack PB #1. Under 40 CFR 63.11169, Subpart HHHHHH, emission unit PB #1 is considered an affected facility. [40 CFR Part 63, Subpart HHHHHH]
- (b) One (1) spray paint booth, identified as PB #2, constructed in 1991, utilizing one (1) low pressure electrostatic air atomized spray gun, with a maximum surface coating capacity of 0.04 gallons of coatings per metal unit and 1.17 metal units per hour. Emissions are controlled by dry filters and exhausts at stack PB #2. Under 40 CFR 63.11169, Subpart HHHHHH, emission unit PB #2 is considered an affected facility. [40 CFR Part 63, Subpart HHHHHH]
- (c) One (1) spray paint booth, identified as PB #3, constructed in 1991, utilizing one (1) low pressure electrostatic air atomized spray gun, with a maximum surface coating capacity of 0.01 gallons of coatings per metal unit and 8.25 metal units per hour. Emissions are controlled by dry filters and exhausts at stack PB #3. Under 40 CFR 63.11169, Subpart HHHHHH, emission unit PB #3 is considered an affected facility. [40 CFR Part 63, Subpart HHHHHH]
- (d) One (1) spray paint booth, identified as PB #4, constructed in 1991, utilizing one (1) low pressure electrostatic air atomized spray gun, with a maximum surface coating capacity of 0.01 gallons of coatings per metal unit and 0.42 metal units per hour. Emissions are controlled by dry filters and exhausts at stack PB #4. Under 40 CFR 63.11169, Subpart HHHHHH, emission unit PB #4 is considered an affected facility. [40 CFR Part 63, Subpart HHHHHH]

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

National Emission Standards for Hazardous Air Pollutants [40 CFR 63, Subpart A, Subpart HHHHHH] [326 IAC 20]

E.1.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants [40 CFR 63, Subpart A] [326 IAC 20-1]

- (a) Pursuant to 40 CFR 63.1, the Permittee shall comply with the provisions of 40 CFR 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, for the spray booths, identified as emission unit PB #1 through PB #4 except as otherwise specified in 40 CFR Part 63, Subpart HHHHHH.
- (b) Pursuant to 40 CFR 63.9, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

Indianapolis OES
Air Compliance
2700 South Belmont Ave.
Indianapolis, IN 46221

E.1.2 Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources NESHAP [40 CFR 63, Subpart HHHHHH] [326 IAC 20-1]

The Permittee shall comply with the following provisions of 40 CFR 63, Subpart HHHHHH (included as Attachment A of this permit), for the spray booths, identified as emission unit PB #1 through PB #4:

- (1) 40 CFR 63.11169(c)
- (2) 40 CFR 63.11169(d)
- (3) 40 CFR 63.11170(a)(3)
- (4) 40 CFR 63.11170(b)
- (5) 40 CFR 63.11171(a)
- (6) 40 CFR 63.11171(b)
- (7) 40 CFR 63.11171(e)
- (8) 40 CFR 63.11172(b)
- (9) 40 CFR 63.11173(e)
- (10) 40 CFR 63.11173(f)
- (11) 40 CFR 63.11173(g)
- (12) 40 CFR 63.11174
- (13) 40 CFR 63.11175
- (14) 40 CFR 63.11176(a)
- (15) 40 CFR 63.11177(a)
- (16) 40 CFR 63.11177(b)
- (17) 40 CFR 63.11177(c)
- (18) 40 CFR 63.11177(d)
- (19) 40 CFR 63.11177(g)
- (20) 40 CFR 63.11177(h)
- (21) 40 CFR 63.11178
- (22) 40 CFR 63.11179
- (23) 40 CFR 63.11180
- (24) Table 1

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
and
INDIANAPOLIS OFFICE OF ENVIRONMENTAL SERVICES
AIR COMPLIANCE**

**REGISTRATION
ANNUAL NOTIFICATION**

Year: _____

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3).

Company Name:	Klinge Enameling, Inc.
Address:	5001 E. Prospect Street
City:	Indianapolis, Indiana 46203
Phone Number:	(317) 359-8294
Registration No.:	R097-25720-00238

I hereby certify that Klinge Enameling, Inc. is :

still in operation.

I hereby certify that Klinge Enameling, Inc. is :

no longer in operation.

in compliance with the requirements of Registration No. R097-25720-00238.

not in compliance with the requirements of Registration No. R097-25720-00238.

Authorized Individual (typed):
Title:
Signature:
Phone Number:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

Attachment A

Subpart HHHHHH—National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources

Source: 73 FR 1760, Jan. 9, 2008, unless otherwise noted.

What This Subpart Covers

§ 63.11169 What is the purpose of this subpart?

Except as provided in paragraph (d) of this section, this subpart establishes national emission standards for hazardous air pollutants (HAP) for area sources involved in any of the activities in paragraphs (a) through (c) of this section. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission standards contained herein.

(a) Paint stripping operations that involve the use of chemical strippers that contain methylene chloride (MeCl), Chemical Abstract Service number 75092, in paint removal processes;

(b) Autobody refinishing operations that encompass motor vehicle and mobile equipment spray-applied surface coating operations;

(c) Spray application of coatings containing compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd), collectively referred to as the target HAP to any part or product made of metal or plastic, or combinations of metal and plastic that are not motor vehicles or mobile equipment.

(d) This subpart does not apply to any of the activities described in paragraph (d)(1) through (6) of this section.

(1) Surface coating or paint stripping performed on site at installations owned or operated by the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State), the National Aeronautics and Space Administration, or the National Nuclear Security Administration.

(2) Surface coating or paint stripping of military munitions, as defined in §63.11180, manufactured by or for the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State) or equipment directly and exclusively used for the purposes of transporting military munitions.

(3) Surface coating or paint stripping performed by individuals on their personal vehicles, possessions, or property, either as a hobby or for maintenance of their personal vehicles, possessions, or property. This subpart also does not apply when these operations are performed by individuals for others without compensation. An individual who spray applies surface coating to more than two motor vehicles or pieces of mobile equipment per year is subject to the requirements in this subpart that pertain to motor vehicle and mobile equipment surface coating regardless of whether compensation is received.

(4) Surface coating or paint stripping that meets the definition of “research and laboratory activities” in §63.11180.

(5) Surface coating or paint stripping that meets the definition of “quality control activities” in §63.11180.

(6) Surface coating or paint stripping activities that are covered under another area source NESHAP.

§ 63.11170 *Am I subject to this subpart?*

(a) You are subject to this subpart if you operate an area source of HAP as defined in paragraph (b) of this section, including sources that are part of a tribal, local, State, or Federal facility and you perform one or more of the activities in paragraphs (a)(1) through (3) of this section:

(1) Perform paint stripping using MeCl for the removal of dried paint (including, but not limited to, paint, enamel, varnish, shellac, and lacquer) from wood, metal, plastic, and other substrates.

(2) Perform spray application of coatings, as defined in §63.11180, to motor vehicles and mobile equipment including operations that are located in stationary structures at fixed locations, and mobile repair and refinishing operations that travel to the customer's location, except spray coating applications that meet the definition of facility maintenance in §63.11180. However, if you are the owner or operator of a motor vehicle or mobile equipment surface coating operation, you may petition the Administrator for an exemption from this subpart if you can demonstrate, to the satisfaction of the Administrator, that you spray apply no coatings that contain the target HAP, as defined in §63.11180. Petitions must include a description of the coatings that you spray apply and your certification that you do not spray apply any coatings containing the target HAP. If circumstances change such that you intend to spray apply coatings containing the target HAP, you must submit the initial notification required by 63.11175 and comply with the requirements of this subpart.

(3) Perform spray application of coatings that contain the target HAP, as defined in §63.11180, to a plastic and/or metal substrate on a part or product, except spray coating applications that meet the definition of facility maintenance or space vehicle in §63.11180.

(b) An area source of HAP is a source of HAP that is not a major source of HAP, is not located at a major source, and is not part of a major source of HAP emissions. A major source of HAP emissions is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (Mg) (10 tons) or more per year, or emit any combination of HAP at a rate of 22.68 Mg (25 tons) or more per year.

§ 63.11171 *How do I know if my source is considered a new source or an existing source?*

(a) This subpart applies to each new and existing affected area source engaged in the activities listed in §63.11170, with the exception of those activities listed in §63.11169(d) of this subpart.

(b) The affected source is the collection of all of the items listed in paragraphs (b)(1) through (6) of this section. Not all affected sources will have all of the items listed in paragraphs (b)(1) through (6) of this section.

(1) Mixing rooms and equipment;

(2) Spray booths, ventilated prep stations, curing ovens, and associated equipment;

(3) Spray guns and associated equipment;

(4) Spray gun cleaning equipment;

(5) Equipment used for storage, handling, recovery, or recycling of cleaning solvent or waste paint; and

(6) Equipment used for paint stripping at paint stripping facilities using paint strippers containing MeCl.

(c) An affected source is a new source if it meets the criteria in paragraphs (c)(1) and (c)(2) of this section.

(1) You commenced the construction of the source after September 17, 2007 by installing new paint stripping or surface coating equipment. If you purchase and install spray booths, enclosed spray gun cleaners, paint stripping

equipment to reduce MeCl emissions, or purchase new spray guns to comply with this subpart at an existing source, these actions would not make your existing source a new source.

(2) The new paint stripping or surface coating equipment is used at a source that was not actively engaged in paint stripping and/or miscellaneous surface coating prior to September 17, 2007.

(d) An affected source is reconstructed if it meets the definition of reconstruction in §63.2.

(e) An affected source is an existing source if it is not a new source or a reconstructed source.

General Compliance Requirements

§ 63.11172 When do I have to comply with this subpart?

The date by which you must comply with this subpart is called the compliance date. The compliance date for each type of affected source is specified in paragraphs (a) and (b) of this section.

(a) For a new or reconstructed affected source, the compliance date is the applicable date in paragraph (a)(1) or (2) of this section:

(1) If the initial startup of your new or reconstructed affected source is after September 17, 2007, the compliance date is January 9, 2008.

(2) If the initial startup of your new or reconstructed affected source occurs after January 9, 2008, the compliance date is the date of initial startup of your affected source.

(b) For an existing affected source, the compliance date is January 10, 2011.

§ 63.11173 What are my general requirements for complying with this subpart?

(a) Each paint stripping operation that is an affected area source must implement management practices to minimize the evaporative emissions of MeCl. The management practices must address, at a minimum, the practices in paragraphs (a)(1) through (5) of this section, as applicable, for your operations.

(1) Evaluate each application to ensure there is a need for paint stripping (e.g., evaluate whether it is possible to re-coat the piece without removing the existing coating).

(2) Evaluate each application where a paint stripper containing MeCl is used to ensure that there is no alternative paint stripping technology that can be used.

(3) Reduce exposure of all paint strippers containing MeCl to the air.

(4) Optimize application conditions when using paint strippers containing MeCl to reduce MeCl evaporation (e.g., if the stripper must be heated, make sure that the temperature is kept as low as possible to reduce evaporation).

(5) Practice proper storage and disposal of paint strippers containing MeCl (e.g., store stripper in closed, air-tight containers).

(b) Each paint stripping operation that has annual usage of more than one ton of MeCl must develop and implement a written MeCl minimization plan to minimize the use and emissions of MeCl. The MeCl minimization plan must address, at a minimum, the management practices specified in paragraphs (a)(1) through (5) of this section, as applicable, for your operations. Each operation must post a placard or sign outlining the MeCl minimization plan in each area where paint stripping operations subject to this subpart occur. Paint stripping operations with annual usage

of less than one ton of MeCl, must comply with the requirements in paragraphs (a)(1) through (5) of this section, as applicable, but are not required to develop and implement a written MeCl minimization plan.

(c) Each paint stripping operation must maintain copies of annual usage of paint strippers containing MeCl on site at all times.

(d) Each paint stripping operation with annual usage of more than one ton of MeCl must maintain a copy of their current MeCl minimization plan on site at all times.

(e) Each motor vehicle and mobile equipment surface coating operation and each miscellaneous surface coating operation must meet the requirements in paragraphs (e)(1) through (e)(5) of this section.

(1) All painters must be certified that they have completed training in the proper spray application of surface coatings and the proper setup and maintenance of spray equipment. The minimum requirements for training and certification are described in paragraph (f) of this section. The spray application of surface coatings is prohibited by persons who are not certified as having completed the training described in paragraph (f) of this section. The requirements of this paragraph do not apply to the students of an accredited surface coating training program who are under the direct supervision of an instructor who meets the requirements of this paragraph.

(2) All spray-applied coatings must be applied in a spray booth, preparation station, or mobile enclosure that meets the requirements of paragraph (e)(2)(i) of this section and either paragraph (e)(2)(ii), (e)(2)(iii), or (e)(2)(iv) of this section.

(i) All spray booths, preparation stations, and mobile enclosures must be fitted with a type of filter technology that is demonstrated to achieve at least 98-percent capture of paint overspray. The procedure used to demonstrate filter efficiency must be consistent with the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Method 52.1, "Gravimetric and Dust-Spot Procedures for Testing Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter, June 4, 1992" (incorporated by reference, see §63.14 of subpart A of this part). The test coating for measuring filter efficiency shall be a high solids bake enamel delivered at a rate of at least 135 grams per minute from a conventional (non-HVLP) air-atomized spray gun operating at 40 pounds per square inch (psi) air pressure; the air flow rate across the filter shall be 150 feet per minute. Owners and operators may use published filter efficiency data provided by filter vendors to demonstrate compliance with this requirement and are not required to perform this measurement. The requirements of this paragraph do not apply to waterwash spray booths that are operated and maintained according to the manufacturer's specifications.

(ii) Spray booths and preparation stations used to refinish complete motor vehicles or mobile equipment must be fully enclosed with a full roof, and four complete walls or complete side curtains, and must be ventilated at negative pressure so that air is drawn into any openings in the booth walls or preparation station curtains. However, if a spray booth is fully enclosed and has seals on all doors and other openings and has an automatic pressure balancing system, it may be operated at up to, but not more than, 0.05 inches water gauge positive pressure.

(iii) Spray booths and preparation stations that are used to coat miscellaneous parts and products or vehicle subassemblies must have a full roof, at least three complete walls or complete side curtains, and must be ventilated so that air is drawn into the booth. The walls and roof of a booth may have openings, if needed, to allow for conveyors and parts to pass through the booth during the coating process.

(iv) Mobile ventilated enclosures that are used to perform spot repairs must enclose and, if necessary, seal against the surface around the area being coated such that paint overspray is retained within the enclosure and directed to a filter to capture paint overspray.

(3) All spray-applied coatings must be applied with a high volume, low pressure (HVLP) spray gun, electrostatic application, airless spray gun, air-assisted airless spray gun, or an equivalent technology that is demonstrated by the spray gun manufacturer to achieve transfer efficiency comparable to one of the spray gun technologies listed above for a comparable operation, and for which written approval has been obtained from the Administrator. The procedure used to demonstrate that spray gun transfer efficiency is equivalent to that of an HVLP spray gun must be equivalent to the California South Coast Air Quality Management District's "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989" and "Guidelines for Demonstrating Equivalency with District Approved Transfer Efficient Spray Guns, September 26, 2002" (incorporated by reference, see §63.14 of subpart A of this part). The requirements of this paragraph do not apply to painting performed by students and instructors at paint training

centers. The requirements of this paragraph do not apply to the surface coating of aerospace vehicles that involves the coating of components that normally require the use of an airbrush or an extension on the spray gun to properly reach limited access spaces; to the application of coatings on aerospace vehicles that contain fillers that adversely affect atomization with HVLP spray guns; or to the application of coatings on aerospace vehicles that normally have a dried film thickness of less than 0.0013 centimeter (0.0005 in.).

(4) All paint spray gun cleaning must be done so that an atomized mist or spray of gun cleaning solvent and paint residue is not created outside of a container that collects used gun cleaning solvent. Spray gun cleaning may be done with, for example, hand cleaning of parts of the disassembled gun in a container of solvent, by flushing solvent through the gun without atomizing the solvent and paint residue, or by using a fully enclosed spray gun washer. A combination of non-atomizing methods may also be used.

(5) As provided in §63.6(g), we, the U.S. Environmental Protection Agency, may choose to grant you permission to use an alternative to the emission standards in this section after you have requested approval to do so according to §63.6(g)(2).

(f) Each owner or operator of an affected miscellaneous surface coating source must ensure and certify that all new and existing personnel, including contract personnel, who spray apply surface coatings, as defined in §63.11180, are trained in the proper application of surface coatings as required by paragraph (e)(1) of this section. The training program must include, at a minimum, the items listed in paragraphs (f)(1) through (f)(3) of this section.

(1) A list of all current personnel by name and job description who are required to be trained;

(2) Hands-on and classroom instruction that addresses, at a minimum, initial and refresher training in the topics listed in paragraphs (f)(2)(i) through (2)(iv) of this section.

(i) Spray gun equipment selection, set up, and operation, including measuring coating viscosity, selecting the proper fluid tip or nozzle, and achieving the proper spray pattern, air pressure and volume, and fluid delivery rate.

(ii) Spray technique for different types of coatings to improve transfer efficiency and minimize coating usage and overspray, including maintaining the correct spray gun distance and angle to the part, using proper banding and overlap, and reducing lead and lag spraying at the beginning and end of each stroke.

(iii) Routine spray booth and filter maintenance, including filter selection and installation.

(iv) Environmental compliance with the requirements of this subpart.

(3) A description of the methods to be used at the completion of initial or refresher training to demonstrate, document, and provide certification of successful completion of the required training. Owners and operators who can show by documentation or certification that a painter's work experience and/or training has resulted in training equivalent to the training required in paragraph (f)(2) of this section are not required to provide the initial training required by that paragraph to these painters.

(g) As required by paragraph (e)(1) of this section, all new and existing personnel at an affected motor vehicle and mobile equipment or miscellaneous surface coating source, including contract personnel, who spray apply surface coatings, as defined in §63.11180, must be trained by the dates specified in paragraphs (g)(1) and (2) of this section. Employees who transfer within a company to a position as a painter are subject to the same requirements as a new hire.

(1) If your source is a new source, all personnel must be trained and certified no later than 180 days after hiring or no later than July 7, 2008, whichever is later. Painter training that was completed within five years prior to the date training is required, and that meets the requirements specified in paragraph (f)(2) of this section satisfies this requirement and is valid for a period not to exceed five years after the date the training is completed.

(2) If your source is an existing source, all personnel must be trained and certified no later than 180 days after hiring or no later than January 10, 2011, whichever is later. Painter training that was completed within five years prior to the

date training is required, and that meets the requirements specified in paragraph (f)(2) of this section satisfies this requirement and is valid for a period not to exceed five years after the date the training is completed.

(3) Training and certification will be valid for a period not to exceed five years after the date the training is completed, and all personnel must receive refresher training that meets the requirements of this section and be re-certified every five years.

[73 FR 1760, Jan. 9, 2008; 73 FR 8408, Feb. 13, 2008]

§ 63.11174 What parts of the General Provisions apply to me?

(a) Table 1 of this subpart shows which parts of the General Provisions in subpart A apply to you.

(b) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

Notifications, Reports, and Records

§ 63.11175 What notifications must I submit?

(a) Initial Notification. If you are the owner or operator of a paint stripping operation using paint strippers containing MeCl and/or a surface coating operation subject to this subpart, you must submit the initial notification required by §63.9(b). For a new affected source, you must submit the Initial Notification no later than 180 days after initial startup or July 7, 2008, whichever is later. For an existing affected source, you must submit the initial notification no later than January 11, 2010. The initial notification must provide the information specified in paragraphs (a)(1) through (8) of this section.

(1) The company name, if applicable.

(2) The name, title, street address, telephone number, e-mail address (if available), and signature of the owner and operator, or other certifying company official;

(3) The street address (physical location) of the affected source and the street address where compliance records are maintained, if different. If the source is a motor vehicle or mobile equipment surface coating operation that repairs vehicles at the customer's location, rather than at a fixed location, such as a collision repair shop, the notification should state this and indicate the physical location where records are kept to demonstrate compliance;

(4) An identification of the relevant standard (i.e., this subpart, 40 CFR part 63, subpart HHHHHH);

(5) A brief description of the type of operation as specified in paragraph (a)(5)(i) or (ii) of this section.

(i) For all surface coating operations, indicate whether the source is a motor vehicle and mobile equipment surface coating operation or a miscellaneous surface coating operation, and include the number of spray booths and preparation stations, and the number of painters usually employed at the operation.

(ii) For paint stripping operations, identify the method(s) of paint stripping employed (e.g., chemical, mechanical) and the substrates stripped (e.g., wood, plastic, metal).

(6) Each paint stripping operation must indicate whether they plan to annually use more than one ton of MeCl after the compliance date.

(7) A statement of whether the source is already in compliance with each of the relevant requirements of this subpart, or whether the source will be brought into compliance by the compliance date. For paint stripping operations, the

relevant requirements that you must evaluate in making this determination are specified in §63.11173(a) through (d) of this subpart. For surface coating operations, the relevant requirements are specified in §63.11173(e) through (g) of this subpart.

(8) If your source is a new source, you must certify in the initial notification whether the source is in compliance with each of the requirements of this subpart. If your source is an existing source, you may certify in the initial notification that the source is already in compliance. If you are certifying in the initial notification that the source is in compliance with the relevant requirements of this subpart, then include also a statement by a responsible official with that official's name, title, phone number, e-mail address (if available) and signature, certifying the truth, accuracy, and completeness of the notification, a statement that the source has complied with all the relevant standards of this subpart, and that this initial notification also serves as the notification of compliance status.

(b) Notification of Compliance Status. If you are the owner or operator of a new source, you are not required to submit a separate notification of compliance status in addition to the initial notification specified in paragraph (a) of this subpart provided you were able to certify compliance on the date of the initial notification, as part of the initial notification, and your compliance status has not since changed. If you are the owner or operator of any existing source and did not certify in the initial notification that your source is already in compliance as specified in paragraph (a) of this section, then you must submit a notification of compliance status. You must submit a Notification of Compliance Status on or before March 11, 2011. You are required to submit the information specified in paragraphs (b)(1) through (4) of this section with your Notification of Compliance Status:

(1) Your company's name and the street address (physical location) of the affected source and the street address where compliance records are maintained, if different.

(2) The name, title, address, telephone, e-mail address (if available) and signature of the owner and operator, or other certifying company official, certifying the truth, accuracy, and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of this subpart or an explanation of any noncompliance and a description of corrective actions being taken to achieve compliance. For paint stripping operations, the relevant requirements that you must evaluate in making this determination are specified in §63.11173(a) through (d). For surface coating operations, the relevant requirements are specified in §63.11173(e) through (g).

(3) The date of the Notification of Compliance Status.

(4) If you are the owner or operator of an existing affected paint stripping source that annually uses more than one ton of MeCl, you must submit a statement certifying that you have developed and are implementing a written MeCl minimization plan in accordance with §63.11173(b).

§ 63.11176 What reports must I submit?

(a) Annual Notification of Changes Report. If you are the owner or operator of a paint stripping, motor vehicle or mobile equipment, or miscellaneous surface coating affected source, you are required to submit a report in each calendar year in which information previously submitted in either the initial notification required by §63.11175(a), Notification of Compliance, or a previous annual notification of changes report submitted under this paragraph, has changed. Deviations from the relevant requirements in §63.11173(a) through (d) or §63.11173(e) through (g) on the date of the report will be deemed to be a change. This includes notification when paint stripping affected sources that have not developed and implemented a written MeCl minimization plan in accordance with §63.11173(b) used more than one ton of MeCl in the previous calendar year. The annual notification of changes report must be submitted prior to March 1 of each calendar year when reportable changes have occurred and must include the information specified in paragraphs (a)(1) through (2) of this section.

(1) Your company's name and the street address (physical location) of the affected source and the street address where compliance records are maintained, if different.

(2) The name, title, address, telephone, e-mail address (if available) and signature of the owner and operator, or other certifying company official, certifying the truth, accuracy, and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of this subpart or an explanation of any noncompliance and a description of corrective actions being taken to achieve compliance.

(b) If you are the owner or operator of a paint stripping affected source that has not developed and implemented a written MeCl minimization plan in accordance with §63.11173(b) of this subpart, you must submit a report for any calendar year in which you use more than one ton of MeCl. This report must be submitted no later than March 1 of the following calendar year. You must also develop and implement a written MeCl minimization plan in accordance with §63.11173(b) no later than December 31. You must then submit a Notification of Compliance Status report containing the information specified in §63.11175(b) by March 1 of the following year and comply with the requirements for paint stripping operations that annually use more than one ton of MeCl in §§63.11173(d) and 63.11177(f).

§ 63.11177 *What records must I keep?*

If you are the owner or operator of a surface coating operation, you must keep the records specified in paragraphs (a) through (d) and (g) of this section. If you are the owner or operator of a paint stripping operation, you must keep the records specified in paragraphs (e) through (g) of this section, as applicable.

(a) Certification that each painter has completed the training specified in §63.11173(f) with the date the initial training and the most recent refresher training was completed.

(b) Documentation of the filter efficiency of any spray booth exhaust filter material, according to the procedure in §63.11173(e)(3)(i).

(c) Documentation from the spray gun manufacturer that each spray gun with a cup capacity equal to or greater than 3.0 fluid ounces (89 cc) that does not meet the definition of an HVLP spray gun, electrostatic application, airless spray gun, or air assisted airless spray gun, has been determined by the Administrator to achieve a transfer efficiency equivalent to that of an HVLP spray gun, according to the procedure in §63.11173(e)(4).

(d) Copies of any notification submitted as required by §63.11175 and copies of any report submitted as required by §63.11176.

(e) Records of paint strippers containing MeCl used for paint stripping operations, including the MeCl content of the paint stripper used. Documentation needs to be sufficient to verify annual usage of paint strippers containing MeCl (e.g., material safety data sheets or other documentation provided by the manufacturer or supplier of the paint stripper, purchase receipts, records of paint stripper usage, engineering calculations).

(f) If you are a paint stripping source that annually uses more than one ton of MeCl you are required to maintain a record of your current MeCl minimization plan on site for the duration of your paint stripping operations. You must also keep records of your annual review of, and updates to, your MeCl minimization plan.

(g) Records of any deviation from the requirements in §§63.11173, 63.11174, 63.11175, or 63.11176. These records must include the date and time period of the deviation, and a description of the nature of the deviation and the actions taken to correct the deviation.

(h) Records of any assessments of source compliance performed in support of the initial notification, notification of compliance status, or annual notification of changes report.

§ 63.11178 *In what form and for how long must I keep my records?*

(a) If you are the owner or operator of an affected source, you must maintain copies of the records specified in §63.11177 for a period of at least five years after the date of each record. Copies of records must be kept on site and in a printed or electronic form that is readily accessible for inspection for at least the first two years after their date, and may be kept off-site after that two year period.

Other Requirements and Information

§ 63.11179 *Who implements and enforces this subpart?*

(a) This subpart can be implemented and enforced by us, the U.S. Environmental Protection Agency (EPA), or a delegated authority such as your State, local, or tribal agency. If the Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator and are not transferred to the State, local, or tribal agency.

(c) The authority in §63.11173(e)(5) will not be delegated to State, local, or tribal agencies.

§ 63.11180 What definitions do I need to know?

Terms used in this subpart are defined in the Clean Air Act, in 40 CFR 63.2, and in this section as follows:

Additive means a material that is added to a coating after purchase from a supplier (e.g., catalysts, activators, accelerators).

Administrator means, for the purposes of this rulemaking, the Administrator of the U.S. Environmental Protection Agency or the State or local agency that is granted delegation for implementation of this subpart.

Aerospace vehicle or component means any fabricated part, processed part, assembly of parts, or completed unit, with the exception of electronic components, of any aircraft including but not limited to airplanes, helicopters, missiles, rockets, and space vehicles.

Airless and air-assisted airless spray mean any paint spray technology that relies solely on the fluid pressure of the paint to create an atomized paint spray pattern and does not apply any atomizing compressed air to the paint before it leaves the paint nozzle. Air-assisted airless spray uses compressed air to shape and distribute the fan of atomized paint, but still uses fluid pressure to create the atomized paint.

Appurtenance means any accessory to a stationary structure coated at the site of installation, whether installed or detached, including but not limited to: bathroom and kitchen fixtures; cabinets; concrete forms; doors; elevators; fences; hand railings; heating equipment, air conditioning equipment, and other fixed mechanical equipment or stationary tools; lamp posts; partitions; pipes and piping systems; rain gutters and downspouts; stairways, fixed ladders, catwalks, and fire escapes; and window screens.

Architectural coating means a coating to be applied to stationary structures or their appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs.

Cleaning material means a solvent used to remove contaminants and other materials, such as dirt, grease, or oil, from a substrate before or after coating application or from equipment associated with a coating operation, such as spray booths, spray guns, racks, tanks, and hangers. Thus, it includes any cleaning material used on substrates or equipment or both.

Coating means, for the purposes of this subpart, a material spray-applied to a substrate for decorative, protective, or functional purposes. For the purposes of this subpart, coating does not include the following materials:

- (1) Decorative, protective, or functional materials that consist only of protective oils for metal, acids, bases, or any combination of these substances.
- (2) Paper film or plastic film that may be pre-coated with an adhesive by the film manufacturer.
- (3) Adhesives, sealants, maskants, or caulking materials.
- (4) Temporary protective coatings, lubricants, or surface preparation materials.

(5) In-mold coatings that are spray-applied in the manufacture of reinforced plastic composite parts.

Compliance date means the date by which you must comply with this subpart.

Deviation means any instance in which an affected source, subject to this subpart, or an owner or operator of such a source fails to meet any requirement or obligation established by this subpart.

Dry media blasting means abrasive blasting using dry media. Dry media blasting relies on impact and abrasion to remove paint from a substrate. Typically, a compressed air stream is used to propel the media against the coated surface.

Electrostatic application means any method of coating application where an electrostatic attraction is created between the part to be coated and the atomized paint particles.

Equipment cleaning means the use of an organic solvent to remove coating residue from the surfaces of paint spray guns and other painting related equipment, including, but not limited to stir sticks, paint cups, brushes, and spray booths.

Facility maintenance means, for the purposes of this subpart, surface coating performed as part of the routine repair or renovation of the tools, equipment, machinery, and structures that comprise the infrastructure of the affected facility and that are necessary for the facility to function in its intended capacity. *Facility maintenance* also includes surface coating associated with the installation of new equipment or structures, and the application of any surface coating as part of janitorial activities. *Facility maintenance* includes the application of coatings to stationary structures or their appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs. *Facility maintenance* also includes the refinishing of mobile equipment in the field or at the site where they are used in service and at which they are intended to remain indefinitely after refinishing. Such mobile equipment includes, but is not limited to, farm equipment and mining equipment for which it is not practical or feasible to move to a dedicated mobile equipment refinishing facility. Such mobile equipment also includes items, such as fork trucks, that are used in a manufacturing facility and which are refinished in that same facility. *Facility maintenance* does not include surface coating of motor vehicles, mobile equipment, or items that routinely leave and return to the facility, such as delivery trucks, rental equipment, or containers used to transport, deliver, distribute, or dispense commercial products to customers, such as compressed gas canisters.

High-volume, low-pressure (HVLP) spray equipment means spray equipment that is permanently labeled as such and used to apply any coating by means of a spray gun which is designed and operated between 0.1 and 10 pounds per square inch gauge (psig) air atomizing pressure measured dynamically at the center of the air cap and at the air horns.

Initial startup means the first time equipment is brought online in a paint stripping or surface coating operation, and paint stripping or surface coating is first performed.

Materials that contain HAP or HAP-containing materials mean, for the purposes of this subpart, materials that contain 0.1 percent or more by mass of any individual HAP that is an OSHA-defined carcinogen as specified in 29 CFR 1910.1200(d)(4), or 1.0 percent or more by mass for any other individual HAP.

Military munitions means all ammunition products and components produced or used by or for the U.S. Department of Defense (DoD) or for the U.S. Armed Services for national defense and security, including military munitions under the control of the Department of Defense, the U.S. Coast Guard, the National Nuclear Security Administration (NNSA), U.S. Department of Energy (DOE), and National Guard personnel. The term military munitions includes: confined gaseous, liquid, and solid propellants, explosives, pyrotechnics, chemical and riot control agents, smokes, and incendiaries used by DoD components, including bulk explosives and chemical warfare agents, chemical munitions, biological weapons, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolition charges, nonnuclear components of nuclear weapons, wholly inert ammunition products, and all devices and components of any items listed in this definition.

Miscellaneous parts and/or products means any part or product made of metal or plastic, or combinations of metal and plastic. Miscellaneous parts and/or products include, but are not limited to, metal and plastic components of the

following types of products as well as the products themselves: motor vehicle parts and accessories for automobiles, trucks, recreational vehicles; automobiles and light duty trucks at automobile and light duty truck assembly plants; boats; sporting and recreational goods; toys; business machines; laboratory and medical equipment; and household and other consumer products.

Miscellaneous surface coating operation means the collection of equipment used to apply surface coating to miscellaneous parts and/or products made of metal or plastic, including applying cleaning solvents to prepare the surface before coating application, mixing coatings before application, applying coating to a surface, drying or curing the coating after application, and cleaning coating application equipment, but not plating. A single surface coating operation may include any combination of these types of equipment, but always includes at least the point at which a coating material is applied to a given part. A surface coating operation includes all other steps (such as surface preparation with solvent and equipment cleaning) in the affected source where HAP are emitted from the coating of a part. The use of solvent to clean parts (for example, to remove grease during a mechanical repair) does not constitute a miscellaneous surface coating operation if no coatings are applied. A single affected source may have multiple surface coating operations. Surface coatings applied to wood, leather, rubber, ceramics, stone, masonry, or substrates other than metal and plastic are not considered miscellaneous surface coating operations for the purposes of this subpart.

Mobile equipment means any device that may be drawn and/or driven on a roadway including, but not limited to, heavy-duty trucks, truck trailers, fleet delivery trucks, buses, mobile cranes, bulldozers, street cleaners, agriculture equipment, motor homes, and other recreational vehicles (including camping trailers and fifth wheels).

Motor vehicle means any self-propelled vehicle, including, but not limited to, automobiles, light duty trucks, golf carts, vans, and motorcycles.

Motor vehicle and mobile equipment surface coating means the spray application of coatings to assembled motor vehicles or mobile equipment. For the purposes of this subpart, it does not include the surface coating of motor vehicle or mobile equipment parts or subassemblies at a vehicle assembly plant or parts manufacturing plant.

Non-HAP solvent means, for the purposes of this subpart, a solvent (including thinners and cleaning solvents) that contains less than 0.1 percent by mass of any individual HAP that is an OSHA-defined carcinogen as specified in 29 CFR 1910.1200(d)(4) and less than 1.0 percent by mass for any other individual HAP.

Paint stripping and/or miscellaneous surface coating source or facility means any shop, business, location, or parcel of land where paint stripping or miscellaneous surface coating operations are conducted.

Paint stripping means the removal of dried coatings from wood, metal, plastic, and other substrates. A single affected source may have multiple paint stripping operations.

Painter means any person who spray applies coating.

Plastic refers to substrates containing one or more resins and may be solid, porous, flexible, or rigid. Plastics include fiber reinforced plastic composites.

Protective oil means organic material that is applied to metal for the purpose of providing lubrication or protection from corrosion without forming a solid film. This definition of protective oil includes, but is not limited to, lubricating oils, evaporative oils (including those that evaporate completely), and extrusion oils.

Quality control activities means surface coating or paint stripping activities that meet all of the following criteria:

(1) The activities associated with a surface coating or paint stripping operation are intended to detect and correct defects in the final product by selecting a limited number of samples from the operation, and comparing the samples against specific performance criteria.

(2) The activities do not include the production of an intermediate or final product for sale or exchange for commercial profit; for example, parts that are surface coated or stripped are not sold and do not leave the facility.

(3) The activities are not a normal part of the surface coating or paint stripping operation; for example, they do not include color matching activities performed during a motor vehicle collision repair.

(4) The activities do not involve surface coating or stripping of the tools, equipment, machinery, and structures that comprise the infrastructure of the affected facility and that are necessary for the facility to function in its intended capacity; that is, the activities are not facility maintenance.

Research and laboratory activities means surface coating or paint stripping activities that meet one of the following criteria:

(1) Conducted at a laboratory to analyze air, soil, water, waste, or product samples for contaminants, or environmental impact.

(2) Activities conducted to test more efficient production processes, including alternative paint stripping or surface coating materials or application methods, or methods for preventing or reducing adverse environmental impacts, provided that the activities do not include the production of an intermediate or final product for sale or exchange for commercial profit.

(3) Activities conducted at a research or laboratory facility that is operated under the close supervision of technically trained personnel, the primary purpose of which is to conduct research and development into new processes and products and that is not engaged in the manufacture of products for sale or exchange for commercial profit.

Solvent means a fluid containing organic compounds used to perform paint stripping, surface prep, or cleaning of surface coating equipment.

Space Vehicle means vehicles designed to travel beyond the limit of the earth's atmosphere, including but not limited to satellites, space stations, and the Space Shuttle System (including orbiter, external tanks, and solid rocket boosters).

Spray-applied coating operations means coatings that are applied using a hand-held device that creates an atomized mist of coating and deposits the coating on a substrate. For the purposes of this subpart, spray-applied coatings do not include the following materials or activities:

(1) Coatings applied from a hand-held device with a paint cup capacity that is equal to or less than 3.0 fluid ounces (89 cubic centimeters).

(2) Surface coating application using powder coating, hand-held, non-refillable aerosol containers, or non-atomizing application technology, including, but not limited to, paint brushes, rollers, hand wiping, flow coating, dip coating, electrodeposition coating, web coating, coil coating, touch-up markers, or marking pens.

(3) Thermal spray operations (also known as metallizing, flame spray, plasma arc spray, and electric arc spray, among other names) in which solid metallic or non-metallic material is heated to a molten or semi-molten state and propelled to the work piece or substrate by compressed air or other gas, where a bond is produced upon impact.

Surface preparation or *Surface prep* means use of a cleaning material on a portion of or all of a substrate prior to the application of a coating.

Target HAP are compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd).

Target HAP containing coating means a spray-applied coating that contains any individual target HAP that is an Occupational Safety and Health Administration (OSHA)-defined carcinogen as specified in 29 CFR 1910.1200(d)(4) at a concentration greater than 0.1 percent by mass, or greater than 1.0 percent by mass for any other individual target HAP compound. For the purpose of determining whether materials you use contain the target HAP compounds, you may rely on formulation data provided by the manufacturer or supplier, such as the material safety data sheet (MSDS), as long as it represents each target HAP compound in the material that is present at 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other target HAP compounds.

Transfer efficiency means the amount of coating solids adhering to the object being coated divided by the total amount of coating solids sprayed, expressed as a percentage. Coating solids means the nonvolatile portion of the coating that makes up the dry film.

Truck bed liner coating means any coating, excluding color coats, labeled and formulated for application to a truck bed to protect it from surface abrasion.

Table 1 to Subpart HHHHHH of Part 63.—Applicability of General Provisions to Subpart HHHHHH of Part 63

Citation	Subject	Applicable to subpart HHHHHH	Explanation
§63.1(a)(1)–(12)	General Applicability	Yes	
§63.1(b)(1)–(3)	Initial Applicability Determination	Yes	Applicability of subpart HHHHHH is also specified in §63.11170.
§63.1(c)(1)	Applicability After Standard Established	Yes	
§63.1(c)(2)	Applicability of Permit Program for Area Sources	Yes	(63.11174(b) of Subpart HHHHHH exempts area sources from the obligation to obtain Title V operating permits.
§63.1(c)(5)	Notifications	Yes	
§63.1(e)	Applicability of Permit Program to Major Sources Before Relevant Standard is Set	No	(63.11174(b) of Subpart HHHHHH exempts area sources from the obligation to obtain Title V operating permits.
§63.2	Definitions	Yes	Additional definitions are specified in §63.11180.
§63.3(a)–(c)	Units and Abbreviations	Yes	
§63.4(a)(1)–(5)	Prohibited Activities	Yes	
§63.4(b)–(c)	Circumvention/Fragmentation	Yes	
§63.5	Construction/Reconstruction of major sources	No	Subpart HHHHHH applies only to area sources.
§63.6(a)	Compliance With Standards and Maintenance Requirements—Applicability	Yes	
§63.6(b)(1)–(7)	Compliance Dates for New and Reconstructed Sources	Yes	§63.11172 specifies the compliance dates.
§63.6(c)(1)–(5)	Compliance Dates for Existing Sources	Yes	§63.11172 specifies the compliance dates.
§63.6(e)(1)–(2)	Operation and Maintenance	Yes	
§63.6(e)(3)	Startup, Shutdown, and Malfunction Plan	No	No startup, shutdown, and malfunction plan is required by subpart HHHHHH.

§63.6(f)(1)	Compliance Except During Startup, Shutdown, and Malfunction	Yes	
§63.6(f)(2)–(3)	Methods for Determining Compliance	Yes	
§63.6(g)(1)–(3)	Use of an Alternative Standard	Yes	
§63.6(h)	Compliance With Opacity/Visible Emission Standards	No	Subpart HHHHHH does not establish opacity or visible emission standards.
§63.6(i)(1)–(16)	Extension of Compliance	Yes	
§63.6(j)	Presidential Compliance Exemption	Yes	
§63.7	Performance Testing Requirements	No	No performance testing is required by subpart HHHHHH.
§63.8	Monitoring Requirements	No	Subpart HHHHHH does not require the use of continuous monitoring systems.
§63.9(a)–(d)	Notification Requirements	Yes	§63.11175 specifies notification requirements.
§63.9(e)	Notification of Performance Test	No	Subpart HHHHHH does not require performance tests.
§63.9(f)	Notification of Visible Emissions/Opacity Test	No	Subpart HHHHHH does not have opacity or visible emission standards.
§63.9(g)	Additional Notifications When Using CMS	No	Subpart HHHHHH does not require the use of continuous monitoring systems.
§63.9(h)	Notification of Compliance Status	No	§63.11175 specifies the dates and required content for submitting the notification of compliance status.
§63.9(i)	Adjustment of Submittal Deadlines	Yes	
§63.9(j)	Change in Previous Information	Yes	§63.11176(a) specifies the dates for submitting the notification of changes report.
§63.10(a)	Recordkeeping/Reporting—Applicability and General Information	Yes	
§63.10(b)(1)	General Recordkeeping Requirements	Yes	Additional requirements are specified in §63.11177.
§63.10(b)(2)(i)–(xi)	Recordkeeping Relevant to Startup, Shutdown, and Malfunction Periods and CMS	No	Subpart HHHHHH does not require startup, shutdown, and malfunction plans, or CMS.
§63.10(b)(2)(xii)	Waiver of recordkeeping requirements	Yes	
§63.10(b)(2)(xiii)	Alternatives to the relative accuracy test	No	Subpart HHHHHH does not require the use of CEMS.

§63.10(b)(2)(xiv)	Records supporting notifications	Yes	
§63.10(b)(3)	Recordkeeping Requirements for Applicability Determinations	Yes	
§63.10(c)	Additional Recordkeeping Requirements for Sources with CMS	No	Subpart HHHHHH does not require the use of CMS.
§63.10(d)(1)	General Reporting Requirements	Yes	Additional requirements are specified in §63.11176.
§63.10(d)(2)–(3)	Report of Performance Test Results, and Opacity or Visible Emissions Observations	No	Subpart HHHHHH does not require performance tests, or opacity or visible emissions observations.
§63.10(d)(4)	Progress Reports for Sources With Compliance Extensions	Yes	
§63.10(d)(5)	Startup, Shutdown, and Malfunction Reports	No	Subpart HHHHHH does not require startup, shutdown, and malfunction reports.
§63.10(e)	Additional Reporting requirements for Sources with CMS	No	Subpart HHHHHH does not require the use of CMS.
§63.10(f)	Recordkeeping/Reporting Waiver	Yes	
§63.11	Control Device Requirements/Flares	No	Subpart HHHHHH does not require the use of flares.
§63.12	State Authority and Delegations	Yes	
§63.13	Addresses of State Air Pollution Control Agencies and EPA Regional Offices	Yes	
§63.14	Incorporation by Reference	Yes	Test methods for measuring paint booth filter efficiency and spray gun transfer efficiency in §63.11173(e)(2) and (3) are incorporated and included in §63.14.
§63.15	Availability of Information/Confidentiality	Yes	
§63.16(a)	Performance Track Provisions—reduced reporting	Yes	
§63.16(b)–(c)	Performance Track Provisions—reduced reporting	No	Subpart HHHHHH does not establish numerical emission limits.

**Indiana Department of Environmental Management
Office of Air Quality
And
Indianapolis Office of Environmental Services**

Technical Support Document (TSD) for a Registration

Source Description and Location
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Source Name:	Klinge Enameling, Inc.
Source Location:	5001 East Prospect Street, Indianapolis, IN 46203
County:	Marion
SIC Code:	3721
Registration (or Exemption) No.:	R097-25720-00238
Permit Reviewer:	A. Nguyen

On December 18, 2007, the Office of Air Quality (OAQ) and the Indianapolis Office of Environmental Services (OES) received an application from Klinge Enameling, Inc. relating to the construction and operation of a new specialty coatings operation.

Existing Approvals

There have been no previous approvals issued to this source.

County Attainment Status

The source is located in Marion County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Attainment effective February 18, 2000, for the part of the city of Indianapolis bounded by 11 th Street on the north; Capitol Avenue on the west; Georgia Street on the south; and Delaware Street on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of Indianapolis and Marion County.
O ₃	Attainment effective November 8, 2007, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Attainment effective July 10, 2000, for the part of Franklin Township bounded by Thompson Road on the south; Emerson Avenue on the west; Five Points Road on the east; and Troy Avenue on the north. Attainment effective July 10, 2000, for the part of Wayne Township bounded by Rockville Road on the north; Girls School Road on the east; Washington Street on the south; and Bridgeport Road on the west. The remainder of the county is not designated.
¹ Attainment effective October 18, 2000, for the 1-hour ozone standard for the Indianapolis area, including Marion County, and is a maintenance area for the 1-hour ozone National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour designation was revoked effective June 15, 2005. Basic Nonattainment effective April 5, 2005 for PM2.5.	

(a) Ozone Standards

- (1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (2) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph as attainment for the 8-hour ozone standard.
- (3) Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Marion County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) PM_{2.5}

Marion County has been classified as nonattainment for PM_{2.5} in 70 FR 943 dated January 5, 2005. Until U.S. EPA adopts specific New Source Review rules for PM_{2.5} emissions, it has directed states to regulate PM₁₀ emissions as a surrogate for PM_{2.5} emissions pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5.

(c) Other Criteria Pollutants

Marion County has been classified as attainment or unclassifiable in Indiana for SO₂, CO, NO₂, and Pb. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-5.1-2 (Registrations) applicability.

Unpermitted Emission Units and Pollution Control Equipment

The source consists of the following unpermitted emission unit(s):

- (a) One (1) spray paint booth, identified as PB #1, constructed in 1991, utilizing one (1) low pressure electrostatic air atomized spray gun, with a maximum surface coating capacity of 0.01 gallons of coatings per metal unit and 1.17 metal units per hour. Emissions are controlled by dry filters and exhausts at stack PB #1. Under 40 CFR 63.11169, Subpart HHHHHH, emission unit PB #1 is considered an affected facility. [40 CFR Part 63, Subpart HHHHHH]
- (b) One (1) spray paint booth, identified as PB #2, constructed in 1991, utilizing one (1) low pressure electrostatic air atomized spray gun, with a maximum surface coating capacity of 0.04 gallons of coatings per metal unit and 1.17 metal units per hour. Emissions are controlled by dry filters and exhausts at stack PB #2. Under 40 CFR 63.11169, Subpart HHHHHH, emission unit PB #2 is considered an affected facility. [40 CFR Part 63, Subpart HHHHHH]

- (c) One (1) spray paint booth, identified as PB #3, constructed in 1991, utilizing one (1) low pressure electrostatic air atomized spray gun, with a maximum surface coating capacity of 0.01 gallons of coatings per metal unit and 8.25 metal units per hour. Emissions are controlled by dry filters and exhausts at stack PB #3. Under 40 CFR 63.11169, Subpart HHHHHH, emission unit PB #3 is considered an affected facility. [40 CFR Part 63, Subpart HHHHHH]
- (d) One (1) spray paint booth, identified as PB #4, constructed in 1991, utilizing one (1) low pressure electrostatic air atomized spray gun, with a maximum surface coating capacity of 0.01 gallons of coatings per metal unit and 0.42 metal units per hour. Emissions are controlled by dry filters and exhausts at stack PB #4. Under 40 CFR 63.11169, Subpart HHHHHH, emission unit PB #4 is considered an affected facility. [40 CFR Part 63, Subpart HHHHHH]
- (e) Two (2) blasting machines, identified as SB #1 and SB #2, constructed in 1991, utilizing aluminum oxides as the blasting media and consisting of 1/4 inch blasting nozzle operating at thirty (30) pounds per square inch pressure. The maximum hourly blasting media process rate is 0.09 tons per hour for each machine. Emissions are controlled by a baghouse and exhaust indoors.
- (f) One (1) blasting machine, identified as SB #3, constructed in 1991, utilizing glass beads as the blasting media and consisting of 1/4 inch blasting nozzle operating at thirty (30) pounds per square inch pressure. The maximum hourly blasting media process rate is 0.06 tons per hour. Emissions are controlled by a baghouse and exhaust indoors.
- (g) One (1) blasting machine, identified as SB #4, constructed in 1991, utilizing urea as the blasting media and consisting of 1/4 inch blasting nozzle operating at thirty (30) pounds per square inch pressure. The maximum hourly blasting media process rate is 0.027 tons per hour. Emissions are controlled by a baghouse and exhaust indoors.
- (h) Two (2) natural gas curing ovens, identified as OV-1 and OV-2, constructed in 1990, with a maximum heat capacity of 0.97 MMBtu/hr and 1.0 MMBth/hr, exhausting to stacks ID OV-1 and OV-2 respectively.
- (i) Eleven (11) natural gas space heaters, with a total maximum heat input capacity of 2.03 MMBtu/hr, constructed at various times from 1990 to 2004.

Enforcement Issues

IDEM and OES are aware that equipment has been constructed and operated prior to receipt of the proper permit. IDEM and OES are reviewing this matter and will take the appropriate action. This proposed approval is intended to satisfy the requirements of the construction permit rules.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – Registration

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/Emission Unit	Potential To Emit of the Entire Source (tons/year)							
	PM	PM10*	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Spray Paint Booth/ PB #1	0.04	0.04	negl.	negl.	0.06	negl.	0.14	0.14 strontium chromate
Spray Paint Booth/ PB #2	0.30	0.30	negl.	negl.	0.71	negl.	0.10	0.10 methy isobutyl ketone
Spray Paint Booth/ PB #3	0.68	0.68	negl.	negl.	1.27	negl.	1.81	0.88 hexamethylene diisocyanate
Spray Paint Booth/ PB #4	0.07	0.07	negl.	negl.	negl.	negl.	0.02	0.02 chromium compounds
Blasting Machines / SB #1 and SB #2	15.43	15.43	negl.	negl.	negl.	negl.	negl.	negl.
Blasting Machine / SB #3	4.82	4.82	negl.	negl.	negl.	negl.	negl.	negl.
Blasting Machine / SB #4	2.36	2.36	negl.	negl.	negl.	negl.	negl.	negl.
Natural gas combustion units	0.03	0.13	0.01	1.75	0.10	1.47	0.03	0.03 hexane
Total PTE of Entire Source	23.73	23.83	0.01	1.75	2.14	1.47	2.10	0.88

negl. = negligible
 * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of PM and PM10 are within the ranges listed in 326 IAC 2-5.1-2(a)(1). The PTE of all other regulated criteria pollutants are less than the ranges listed in 326 IAC 2-5.1-2(a)(1). Therefore, the source is subject to the provisions of 326 IAC 2-5.1-2 (Registrations). A Registration will be issued.
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

- (a) There are no New Source Performance Standards (NSPS)(40 CFR Part 60) included in the Registration.
- (b) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Miscellaneous Metal Parts and Products, 40 CFR 63.3880, Subpart M (326 IAC 20-80-1), are not included in this Registration, because Klinge Enameling, Inc., as a registered source, is not considered a major source, is not located at a major source, and is not part of a major source of emissions of HAPs.

- (c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Plastic Parts and Products, 40 CFR 63.4480, Subpart PPPP (326 IAC 20-81-1), are not included in the permit, since Klinge Enameling, Inc. does not coat plastic parts or products, is not considered a major source, is not located at a major source, and is not part of a major source of emissions of HAPs.
- (d) This source is subject to the National Emission Standards for Hazardous Air Pollutants for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources (40 CFR 63.11169) Subpart HHHHHH), because Klinge Enameling, Inc. is considered an area source which utilizes spray application of coatings containing compounds of chromium (Cr), a target HAP as defined in 40 CFR 63.11180.

The units subject to this rule include the following:

- (1) One (1) spray paint booth, identified as PB #1, constructed in 1991, utilizing one (1) low pressure electrostatic air atomized spray gun, with a maximum surface coating capacity of 0.01 gallons of coatings per metal unit and 1.17 metal units per hour. Emissions are controlled by dry filters and exhausts at stack PB #1. Under 40 CFR 63.11169, Subpart HHHHHH, emission unit PB #1 is considered an affected facility. [40 CFR 63, Subpart HHHHHH]
- (2) One (1) spray paint booth, identified as PB #2, constructed in 1991, utilizing one (1) low pressure electrostatic air atomized spray gun, with a maximum surface coating capacity of 0.04 gallons of coatings per metal unit and 1.17 metal units per hour. Emissions are controlled by dry filters and exhausts at stack PB #2. Under 40 CFR 63.11169, Subpart HHHHHH, emission unit PB #2 is considered an affected facility. [40 CFR 63, Subpart HHHHHH]
- (3) One (1) spray paint booth, identified as PB #3, constructed in 1991, utilizing one (1) low pressure electrostatic air atomized spray gun, with a maximum surface coating capacity of 0.01 gallons of coatings per metal unit and 8.25 metal units per hour. Emissions are controlled by dry filters and exhausts at stack PB #3. Under 40 CFR 63.11169, Subpart HHHHHH, emission unit PB #3 is considered an affected facility. [40 CFR 63, Subpart HHHHHH]
- (4) One (1) spray paint booth, identified as PB #4, constructed in 1991, utilizing one (1) low pressure electrostatic air atomized spray gun, with a maximum surface coating capacity of 0.01 gallons of coatings per metal unit and 0.42 metal units per hour. Emissions are controlled by dry filters and exhausts at stack PB #4. Under 40 CFR 63.11169, Subpart HHHHHH, emission unit PB #4 is considered an affected facility. [40 CFR 63, Subpart HHHHHH]

Applicable portions of the NESHAP are the following:

- (1) 40 CFR 63.11169(c)
- (2) 40 CFR 63.11169(d)
- (3) 40 CFR 63.11170(a)(3)
- (4) 40 CFR 63.11170(b)
- (5) 40 CFR 63.11171(a)
- (6) 40 CFR 63.11171(b)
- (7) 40 CFR 63.11171(e)
- (8) 40 CFR 63.11172(b)
- (9) 40 CFR 63.11173(e)
- (10) 40 CFR 63.11173(f)

- (11) 40 CFR 63.11173(g)
- (12) 40 CFR 63.11174
- (13) 40 CFR 63.11175
- (14) 40 CFR 63.11176(a)
- (15) 40 CFR 63.11177(a)
- (16) 40 CFR 63.11177(b)
- (17) 40 CFR 63.11177(c)
- (18) 40 CFR 63.11177(d)
- (19) 40 CFR 63.11177(g)
- (20) 40 CFR 63.11177(h)
- (21) 40 CFR 63.11178
- (22) 40 CFR 63.11179
- (23) 40 CFR 63.11180
- (24) Table 1

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the spray booths, identified as PB #1 through PB #4, except as otherwise specified in 40 CFR 63, Subpart HHHHHH.

- (e) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the Registration.
- (f) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

The following state rules are applicable to the source:

- (a) 326 IAC 2-5.1-2 (Registrations)
Registration applicability is discussed under the Permit Level Determination – Registration section above.
- (b) 326 IAC 2-1.1-5 (Non-attainment New Source Review)
Marion County has been designated as nonattainment for PM2.5. According to an EPA guidance memo dated April 5, 2005, PM10 is to be utilized as a surrogate for PM2.5 until the EPA can promulgate the PM2.5 implementation rule. PM10 emissions, and therefore PM2.5 emissions, from this source are less than one hundred (100) tons per twelve consecutive month period. Therefore, this source is not subject to nonattainment new source review requirements for PM2.5 emissions.
- (c) 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Requirements)
This source is not a major stationary source because no attainment regulated pollutant emissions are equal to or greater than two hundred fifty (250) tons per year, this source is not one of the 28 listed source categories under 326 IAC 2-2. Therefore, 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Requirements) is not applicable to the source.
- (d) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-4.1.
- (e) 326 IAC 2-6 (Emission Reporting)

Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.

- (f) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
- (1) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- (g) 326 IAC 6.5 (Particulate Matter Limitations Except Lake County) and 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
This source does not have potential particulate matter emissions greater than 100 tons per year. Since the controlled potential to emit is less than 10 tons per year, then actual emissions would be less than 10 tons per year (see Appendix A pages 2, 4, 5 and 6). Therefore, 326 IAC 6.5-1 does not apply. This source is not specifically identified in 6.5-6. Therefore, 326 IAC 6.5-6 does not apply. This source does not have any emission units considered as indirect heating. Therefore, 326 IAC 6-2 does not apply.
- (h) 26 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.
- (i) 26 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is not subject to the requirements of 326 IAC 6-5, because the source does not have potential fugitive particulate emissions greater than 25 tons per year. Therefore, 326 IAC 6-5 does not apply.
- (j) 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)
Neither the source or any individual emission units has potential to emit of SO₂ greater than 10 pounds per hour or 25 tons per year. Therefore, 326 IAC 7-1.1 does not apply.
- (k) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Each of the emission units at this source is not subject to the requirements of 326 IAC 8-1-6, since the unlimited potential to emit of VOC from each emission unit is less than twenty-five (25) tons per year.
- (l) 326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.
- (m) 326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

Spray Booths

- (a) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-1(b)(15), surface coating manufacturing processes that use less than five (5) gallons per day are exempt from this rule. Each spray booth uses less than five (5) gallons per day (See Appendix A, page 2). Therefore, 326 IAC 6-3 does not apply to the spray booths, identified as PB #1 through PB #4.

- (b) 326 IAC 8-2-9 (Miscellaneous metal coating operations)
Each spray paint booth has potential VOC emissions less than fifteen (15) pounds per day before add-on controls (See Appendix A, page 2). Since potential VOC emissions are less than 15 pounds per day, then actual VOC emissions will be less than 15 pounds per day. Pursuant to 326 IAC 8-2-1(a)(3), this rule only applies if actual VOC emissions are greater than 15 pounds per day. Therefore, 326 IAC 8-2-9 does not apply to the spray booths, identified as PB#1 through PB#4.

Blasting Operation

- (a) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
(1) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the emission units listed in the table below shall not exceed the emission rate calculated using the following equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour;
and P = process weight rate in tons per hour

The following table sets forth the maximum process weight rate for specific emission units and the allowable rate of emissions calculated for that process weight rate.

Emission Unit	P = Max Process Weight Rate (tons/hr)	E = Calculated Rate of Emission (lb/hr)	Uncontrolled PM PTE (lbs/hr)
Blasting machine, SB #1	0.09	0.82	1.76
Blasting machine, SB #2	0.09	0.82	1.76
Blasting machine, SB #3	0.06	0.62	1.10

In order to comply with this limit, the baghouses associated with emission units SB #1, SB #2, and SB #3 shall be in operation at all times SB #1, SB #2, and SB #3 are in operation.

- (2) Pursuant to 326 IAC 6-3-1(b)(14), manufacturing processes with potential emissions less than 0.551 pounds per hour are exempt from 326 IAC 6-3. The blasting machine, identified as SB #4, has potential emission less than 0.551 pounds per hour (See Appendix A, page 6). Therefore, 326 IAC 6-3 does not apply to SB #4.

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on December 18, 2007.

The construction and operation of this source shall be subject to the conditions of the attached Registration No. 097-25720-00238. The staff recommends to the Administrator that this Registration be approved.

OES Contact

- (a) Questions regarding this proposed permit can be directed to Anh-tuan Nguyen at Indianapolis Office of Environmental Services, Permits Section, 2700 South Belmont, Indianapolis, Indiana 46221 or by telephone at (317) 327-2353.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>.
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov.

Appendix A - Emission Calculations

Company Name: Klinge Enameling, Inc.
Address City IN Zip: 5001 East Prospect, Indianapolis, IN 46203
Permit Number: R097-25720-00238
Plt ID: 097-00238
Reviewer: Anh-tuan Nguyen
Date: 3/11/2008

SUMMARY OF CALCULATED POTENTIAL EMISSION RATES

Emission Unit	PM	PM-10	SO2	NOx	VOC	CO	Highest Single HAP	Combined HAPs
Paint Booth #1	0.04	0.04	0	0	0.06	0	0.14	0.14
Paint Booth #2	0.30	0.30	0	0	0.71	0	0.10	0.10
Paint Booth #3	0.68	0.68	0	0	1.27	0	0.88	1.81
Paint Booth #4	0.07	0.07	0	0	0	0	0.02	0.02
SB #1 and SB #2	15.43	15.43	0	0	0	0	0	0
SB #3	4.82	4.82	0	0	0	0	0	0
SB #4	2.36	2.36	0	0	0	0	0	0
Natural Gas Combustion units	0.03	0.13	0.01	1.75	0.10	1.47	0.03	0.03
Total	23.73	23.83	0.01	1.75	2.14	1.47	0.88	2.10

**Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations**

**Company Name: Klinge Enameling, Inc.
Address City IN Zip: 5001 E. Prospect Street, Indianapolis, IN 46203
Permit Number: R097-25720-00238
Plt ID: 097-00238
Reviewer: A. Nguyen
Date: 3/12/2008**

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	PM/PM10 (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Paint Booth #1 (44GN36)	9.1	68.00%	55.2%	12.8%	60.0%	24.20%	0.01000	1.170	2.90	1.16	0.01	0.33	0.06	0.04	4.79	75%
Paint Booth #2 (03GY444)	9.4	37.30%	0.0%	37.3%	0.0%	51.30%	0.04000	1.170	3.49	3.49	0.16	3.92	0.71	0.30	6.80	75%
Paint Booth #3 (F93G104)	11.1	31.80%	0.0%	31.8%	0.0%	51.00%	0.01000	8.250	3.51	3.51	0.29	6.96	1.27	0.68	6.89	75%
*Paint Booth #4 (Sermatech)	15.0	0.00%	50.0%	0.0%	0.0%	0.00%	0.01000	0.420	0.00	0.00	0.00	0.00	0.00	0.07	0.00	75%

* According to the MSDS, this coating contains no VOCs.

State Potential Emissions	Add worst case coating to all solvents	0.47	11.20	2.04	1.09
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METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
PM10 emission is assumed equal to PM
PM/PM10 Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used
Transfer efficiency is based on electrostatic air-atomized spray on a flat surface.
Gallons per unit and units per hour numbers are based on the application information submitted by Klinge Enameling.

**Appendix A: Emission Calculations
HAP Emission Calculations**

**Company Name: Klinge Enameling, Inc.
Address City IN Zip: 5001 East Prospect, Indianapolis, IN 46203
Permit Number: R097-25720-00238
Plt ID: 097-00238
Permit Reviewer: A. Nguyen
Date: 3/12/2008**

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Strontium chromate	Weight % Toluene	Weight % Formaldehyde	Weight % Benzene	Weight % Hexane	Weight % Glycol Ethers	Weight % Methanol	Strontium chromate Emissions (ton/yr)	Toluene Emissions (ton/yr)	Formaldehyd e Emissions (ton/yr)	Benzene Emissions (ton/yr)	Hexane Emissions (ton/yr)	Glycol Ethers Emissions (ton/yr)	Methanol Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Paint Booth #1 (44GN36)	9.1	0.01000	1.170	30.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.14
Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Cumene	Weight % Methyl Isobutyl Ketone	Weight % Formaldehyde	Weight % Benzene	Weight % Hexane	Weight % Glycol Ethers	Weight % Methanol	Cumene Emissions (ton/yr)	Methyl Isobutyl Ketone Emissions (ton/yr)	Formaldehyd e Emissions (ton/yr)	Benzene Emissions (ton/yr)	Hexane Emissions (ton/yr)	Glycol Ethers Emissions (ton/yr)	Methanol Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Paint Booth #2 (03GY444)	9.4	0.04000	1.170	0.10%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.92E-03	0.10	0.00	0.00	0.00	0.00	0.00	0.10
Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Methyl Isobutyl Ketone	Weight % Toluene	Weight % Ethylbenzene	Weight % Napthalene	Weight % Hexamethylene Diisocyanate	Weight % Methanol	Xylene Emissions (ton/yr)	Methyl Isobutyl Ketone Emissions (ton/yr)	Toluene Emissions (ton/yr)	Ethylbenzene Emissions (ton/yr)	Napthalene Emissions (ton/yr)	Hexamethylen e Diisocyanate Emissions (ton/yr)	Methanol Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Paint Booth #3 (F93G104)	11.1	0.01000	8.250	11.00%	5.00%	5.00%	2.00%	0.40%	22.00%	0.00%	0.44	0.20	0.20	0.08	0.02	0.88	0.00	1.81
Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Chromium Compounds	Weight % Toluene	Weight % Formaldehyde	Weight % Benzene	Weight % Hexane	Weight % Glycol Ethers	Weight % Methanol	Chromium Compounds Emissions (ton/yr)	Toluene Emissions (ton/yr)	Formaldehyd e Emissions (ton/yr)	Benzene Emissions (ton/yr)	Hexane Emissions (ton/yr)	Glycol Ethers Emissions (ton/yr)	Methanol Emissions (ton/yr)	Total HAP Emissions (ton/yr)
Paint Booth #4 (Sermatech)	15.0	0.01000	0.420	6.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02

Strontium chromate Emissions (ton/yr)	Cumene Emissions (ton/yr)	Methyl Isobutyl Ketone Emissions (ton/yr)	Xylene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Ethylbenzene Emissions (ton/yr)	Napthalene Emissions (ton/yr)	Hexamethyl Diisocyanate Emissions (ton/yr)	Chromium Compounds Emissions (ton/yr)
0.14	1.92E-03	0.30	0.44	0.20	0.08	0.02	0.88	0.02

2.07 Total HAPs

Total Potential Emissions

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Appendix A: Emission Calculations
Abrasive Blasting - Confined
Aluminum Oxide Blast #1 and #2

Company Name: Klinge Enameling, Inc.
Address City IN Zip: 5001 East Prospect Street, Indianapolis, IN 46203
Permit Number: R097-25720-00238
Pit ID: 097-00238
Reviewer: A. Nguyen
Date: 3/12/2008

Table 1 - Emission Factors for Abrasives

Abrasive	Emission Factor	
	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3)
Al oxides	160
Sand	99
Steel	487

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate of Sand Through a Blasting Nozzle as a Function of Nozzle pressure and Internal Diamet

Internal diameter, in	Nozzle Pressure (psig)							
	30	40	50	60	70	80	90	100
1/8	28	35	42	49	55	63	70	77
3/16	65	80	94	107	122	135	149	165
1/4	109	138	168	195	221	255	280	309
5/16	205	247	292	354	377	420	462	507
3/8	285	355	417	477	540	600	657	720
7/16	385	472	560	645	755	820	905	940
1/2	503	615	725	835	945	1050	1160	1265
5/8	820	990	1170	1336	1510	1680	1850	2030
3/4	1140	1420	1670	1915	2160	2400	2630	2880
1	2030	2460	2900	3340	3780	4200	4640	5060

Calculations

Adjusting Flow Rates for Different Abrasives and Nozzle Diameter

Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)

FR1 = Sand flow rate (lb/hr) with internal nozzle diameter (ID1) From Table 3 =

D = Density of abrasive (lb/ft3) From Table 2 =

D1 = Density of sand (lb/ft3) =

ID = Actual nozzle internal diameter (in) =

ID1 = Nozzle internal diameter (in) from Table 3 =

109
160
99
0.25
0.25

Flow Rate (FR) (lb/hr) = 176.162 per nozzle

Uncontrolled Emissions (E, lb/hr)

EF = emission factor (lb PM / lb abrasive) From Table 1 =

FR = Flow Rate (lb/hr) =

w = fraction of time of wet blasting =

N = number of nozzles =

0.010
176.162
0
2

Combined uncontrolled Emissions =	3.52 lb/hr
	15.43 ton/yr

Combined Baghouse controlled Emissions =	0.04 lb/hr
	0.15 ton/yr

METHODOLOGY

PM = PM10

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 editio

Ton/yr = lb/hr X 8760 hr/yr X ton/2000 l

Flow Rate (FR) (lb/hr) = FR1 x (ID/ID1)2 x (D/D1)

E = EF x FR x (1-w/200) x N

w should be entered in as a whole number (if w is 50%, enter 50)

Estimated baghouse efficiency = 99%, as reported by the source.

**Appendix A: Emission Calculations
Abrasive Blasting - Confined
Glass Bead Blast #3**

**Company Name: Klinge Enameling, Inc.
Address City IN Zip: 5001 East Prospect Street, Indianapolis, IN 46203
Permit Number: R097-25720-00238
Plt ID: 097-00238
Reviewer: A. Nguyen
Date: 3/12/2008**

Table 1 - Emission Factors for Abrasives

Abrasive	Emission Factor	
	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3)
Al oxides	160
Sand	99
Steel	487
#6 glass bead	100

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate of Sand Through a Blasting Nozzle as a Function of Nozzle pressure and Internal Diameter

Internal diameter, in	Nozzle Pressure (psig)							
	30	40	50	60	70	80	90	100
1/8	28	35	42	49	55	63	70	77
3/16	65	80	94	107	122	135	149	165
1/4	109	138	168	195	221	255	280	309
5/16	205	247	292	354	377	420	462	507
3/8	285	355	417	477	540	600	657	720
7/16	385	472	560	645	755	820	905	940
1/2	503	615	725	835	945	1050	1160	1265
5/8	820	990	1170	1336	1510	1680	1850	2030
3/4	1140	1420	1670	1915	2160	2400	2630	2880
1	2030	2460	2900	3340	3780	4200	4640	5060

Calculations

Adjusting Flow Rates for Different Abrasives and Nozzle Diameter

Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)
 FR1 = Sand flow rate (lb/hr) with internal nozzle diameter (ID1) From Table 3
 D = Density of abrasive (lb/ft3) From Table 2 =
 D1 = Density of sand (lb/ft3) =
 ID = Actual nozzle internal diameter (in) =
 ID1 = Nozzle internal diameter (in) from Table 3 =

109
100
99
0.25
0.25

Flow Rate (FR) (lb/hr) = 110.101 per nozzle

Uncontrolled Emissions (E, lb/hr)

EF = emission factor (lb PM/ lb abrasive) From Table 1 =
 FR = Flow Rate (lb/hr) =
 w = fraction of time of wet blasting =
 N = number of nozzles =

0.010
110.101
0 %
1

Uncontrolled Emissions = 1.10 lb/hr
4.82 ton/yr

Baghouse controlled Emissions = 0.01 lb/hr
0.05 ton/yr

METHODOLOGY

PM = PM10

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)

Ton/yr = lb/hr X 8760 hr/yr X ton/2000 lb

Flow Rate (FR) (lb/hr) = FR1 x (ID/ID1)² x (D/D1)

E = EF x FR x (1-w/200) x N

w should be entered in as a whole number (if w is 50%, enter 50)

Estimated baghouse efficiency = 99%, as reported by the source.

Appendix A: Emission Calculations

**Abrasive Blasting - Confined
Urea Blast #1 and #2**

Company Name: Klinge Enameling, Inc.
Address City IN Zip: 5001 East Prospect Street, Indianapolis, IN 46203
Permit Number: R097-25720-00238
Plt ID: 097-00238
Reviewer: A. Nguyen
Date: 3/12/2008

Table 1 - Emission Factors for Abrasives

Abrasive	Emission Factor	
	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3)
Al oxides	160
Sand	99
Steel	487
20/30 Urea	49

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate of Sand Through a Blasting Nozzle as a Function of Nozzle pressure and Internal Diameter

Internal diameter, in	Nozzle Pressure (psig)							
	30	40	50	60	70	80	90	100
1/8	28	35	42	49	55	63	70	77
3/16	65	80	94	107	122	135	149	165
1/4	109	138	168	195	221	255	280	309
5/16	205	247	292	354	377	420	462	507
3/8	285	355	417	477	540	600	657	720
7/16	385	472	560	645	755	820	905	940
1/2	503	615	725	835	945	1050	1160	1265
5/8	820	990	1170	1336	1510	1680	1850	2030
3/4	1140	1420	1670	1915	2160	2400	2630	2880
1	2030	2460	2900	3340	3780	4200	4640	5060

Calculations

Adjusting Flow Rates for Different Abrasives and Nozzle Diameter

Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)
 FR1 = Sand flow rate (lb/hr) with internal nozzle diameter (ID1) From Table 3 =
 D = Density of abrasive (lb/ft3) From Table 2 =
 D1 = Density of sand (lb/ft3) =
 ID = Actual nozzle internal diameter (in) =
 ID1 = Nozzle internal diameter (in) from Table 3 =

109
49
99
0.25
0.25

Flow Rate (FR) (lb/hr) = 53.949 per nozzle

Uncontrolled Emissions (E, lb/hr)

EF = emission factor (lb PM / lb abrasive) From Table 1 =
 FR = Flow Rate (lb/hr) =
 w = fraction of time of wet blasting =
 N = number of nozzles =

0.010
53.949
0
1

Uncontrolled Emissions =	0.54 lb/hr
	2.36 ton/yr

Baghouse controlled Emissions =	0.01 lb/hr
	0.02 ton/yr

METHODOLOGY

PM = PM10

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)

Ton/yr = lb/hr X 8760 hr/yr X ton/2000 lb

Flow Rate (FR) (lb/hr) = FR1 x (ID/ID1)² x (D/D1)

E = EF x FR x (1-w/200) x N

w should be entered in as a whole number (if w is 50%, enter 50)

Estimated baghouse efficiency = 99%, as reported by the source.

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100**

Company Name: Klinge Enameling, Inc.
Address City IN Zip: 5001 East Prospect, Indianapolis, IN 46203
Permit Number: R097-25720-00238
Pit ID: 097-00238
Reviewer: A. Nguyen
Date: 3/12/2008

Emission Unit ID	Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
001	0.208	
002	0.208	
003	0.128	
004	0.208	
OV-1	0.97	
PMB005	0.08	
006	0.08	
007	0.132	
008	0.312	
009	0.32	
OV-2	1	
010	0.2	
011	0.15	
	4.0	35.0

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.03	0.13	0.01	1.75	0.10	1.47

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
 **Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
 MMBtu = 1,000,000 Btu
 MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
 Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 8 for HAPs emissions calculations.

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100**

HAPs Emissions

Company Name: Klinge Enameling, Inc.
Address City IN Zip: 5001 East Prospect, Indianapolis, IN 46203
Permit Number: 097-25720-00238
Pit ID: 097-00238
Reviewer: A. Nguyen
Date: 3/12/2008

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	3.676E-05	2.100E-05	1.313E-03	3.150E-02	5.951E-05

HAPs - Metals					
Emission Factor in lb/MMcf	Lead	Cadmium	Chromium	Manganese	Nickel
	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	8.751E-06	1.925E-05	2.450E-05	6.651E-06	3.676E-05

Total HAPs
3.303E-02

Methodology is the same as page 7.

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4 (July 1998).