



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

TO: Interested Parties / Applicant
DATE: June 2, 2005
RE: Valmont Industries, Inc / 039-20117-00237
FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

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 13-15-5-3, this permit 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.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require 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 1049, 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 Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER.dot 1/10/05



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

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June 2, 2005

Franco Garcia
Valmont Industries, Inc.
58027 Charlotte Avenue
Elkhart, Indiana 46517

Re: 039-20117-00237
First Significant Revision to
FESOP 039-14186-00237

Dear Franco Garcia:

Valmont Industries, Inc. was issued a renewed Federally Enforceable State Operating Permit (FESOP) on April 3, 2002 for operation of a stationary fabricated metal products facility which manufactures light poles. A letter requesting a change to the FESOP was received on December 17, 2004. The source plans to add an additional shotblaster, identified as EU-03B, of the same type as the shotblaster EU-03. Shotblaster EU-03B will comply with the same applicable requirements and permit terms and conditions as shotblaster EU-03, but will not cause the source's potential to emit to be greater than the threshold levels specified in 326 IAC 2-2 or 326 IAC 2-3. The addition of shotblaster EU-03B is considered a change by administrative amendment pursuant to 326 IAC 2-8-10(a)(14).

Upon further review of the permit, OAQ determined that the permit required revising for the following reasons:

- (a) the allowable particulate matter (PM) emission limit (326 IAC 6-3-2) of 13.83 pounds per hour for the existing shotblaster EU-03 was calculated incorrectly. The corrected particulate matter emission limit for EU-03 is 52.1 pounds per hour.
- (b) since there were no federally enforceable limits established for particulate matter (PM or PM-10) for the existing three (3) powder coating booths (EU-04A, EU-04B, EU-05), the additional uncontrolled emissions from the new shotblaster (EU-03B) would result in a source wide potential to emit of PM greater than two hundred fifty (250) tons per year. Therefore, establishment of a Prevention of Significant Deterioration (PSD) limit for each of the emission units was necessary to limit the source-wide PM emissions to less than 250 tons per year and to make the requirements of 326 IAC 2-2 not applicable. In addition, establishment of a FESOP limit for each of the emission units was necessary to limit the source-wide PM-10 emissions to less than 100 tons per year and to make the requirements of 326 IAC 2-7 not applicable.
- (c) to correct typographical errors, to further clarify the requirements of 326 IAC 6-3-2 and 40 CFR Subpart P, and to add language to Section B that addressed credible evidence.

Pursuant to the provisions of 326 IAC 2-8-11.1(g), these changes to the permit are required to be reviewed in accordance with the Significant Permit Revision procedures of 326 IAC 2-8-11.1(f). Pursuant to the provisions of 326 IAC 2-8-11.1, a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document.

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Nathan Bell, at (800) 451-6027, press 0 and ask for Nathan Bell or extension (4-3350), or dial (317) 234-3350.

Sincerely,

Original Signed by
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

NCB

cc: File - Elkhart County
U.S. EPA, Region V
Elkhart County Health Department
IDEM Northern Regional Office
Air Compliance Section Inspector - Anthony Pelath
Compliance Data Section
Administrative and Development
Technical Support and Modeling



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FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) OFFICE OF AIR QUALITY

**Valmont Industries, Inc.
58027 Charlotte Avenue
Elkhart, Indiana 46517**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: F039-14186-00237	
Issued by: Original signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: April 3, 2002 Expiration Date: April 3, 2007
First Administrative Amendment No.: 039-16924-00237	Issuance Date: April 3, 2003
Second Administrative Amendment No: 039-17645-00237	Issuance Date: November 13, 2003
First Significant Permit Revision No: 039-20117-00237	Pages Affected: 2, 3, 4, 4a, 16, 17, 24, 24a, 24b, 25, 26
Issued by: Original Signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: June 2, 2005

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee 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 Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a fabricated metal products facility which manufactures light poles.

Authorized individual:	Franco Garcia, General Manager
Source Address:	58027 Charlotte Avenue, Elkhart, IN 46517
Mailing Address:	58027 Charlotte Avenue, Elkhart, IN 46517
SIC Code:	3499
Source Location Status:	Elkhart
County Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD Minor Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

- (a) One (1) shotblaster, identified as EU-03, utilizing steel shot, with a maximum blast rate of 108 tons of steel shot per hour, exhausting through cartridge type filters, identified as CD-03a and CD-03b, vented indoors;
- (b) Two (2) powder coating booths, identified as EU-04A and EU-04B; EU-04B is also known as the small parts line. Booth EU-04A has a maximum coating rate of 21.33 pounds per hour and is equipped with three (3) electrostatic applicators only two of which can be used at any one time, exhausting through two (2) cartridge type dust collectors identified as CD-04a and CD-04b and venting back into the system as make up air. Booth EU-04B has a maximum coating rate of 10.67 pounds per hour and is equipped with one (1) electrostatic applicator, exhausting through one (1) cartridge type dust collector identified as CD-04c and venting back into the system as make up air;
- (c) One (1) powder coating booth, identified as EU-05, with a maximum coating rate of 22.53 pounds per hour, exhausting through two (2) cartridge type dust collectors identified as CD-05a and CD-05b and venting back into the building; and
- (d) One (1) shotblaster, identified as EU-03B, utilizing steel shot, with a maximum blast rate of 4.5 tons of steel shot per hour, exhausting through cartridge type filters, identified as CD-03c and CD-03d, vented indoors;

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) One (1) natural gas fired air make-up unit, with a maximum rated capacity of 3.3 million British thermal units per hour;
- (b) One (1) natural gas fired air make-up unit, with a maximum rated capacity of 2.2 million British thermal units per hour;

- (c) One (1) natural gas fired heating unit, with a maximum rated capacity of 3.0 million British thermal units per hour;
- (d) Two (2) natural gas fired bake ovens, each oven with a maximum rated capacity of 3.0 million British thermal units per hour;

The application which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-11(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action, or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAQ, Technical Support and Modeling Section), to determine the appropriate permit fee.

B.24 Advanced Source Modification Approval [326 IAC 2-8-4(11)] [326 IAC 2-1.1-9]

- (a) The requirements to obtain a permit revision under 326 IAC 2-8-11.1 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Section A.3.
- (b) Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction work is suspended for a continuous period of one (1) year or more.

B.25 Credible Evidence [326 IAC 2-8-4(3)] [326 IAC 2-8-5] [62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

C.1 Overall Source Limits [326 IAC 2-8] [326 IAC 2-2]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

- (a) Pursuant to 326 IAC 2-8:
- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period.
 - (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
 - (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
- (b) Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.
- (c) These conditions shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.
- (d) Section D of this permit contains independently enforceable provisions to satisfy these requirements.

C.2 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 permit:

- (a) Opacity shall not exceed an average of forty percent (40%) 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.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and in 326 IAC 9-1-2.

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

- (a) One (1) shotblaster, identified as EU-03, utilizing steel shot, with a maximum blast rate of 108 tons of steel shot per hour, exhausting through cartridge type filters, identified as CD-03a and CD-03b, vented indoors;
- (b) Two (2) powder coating booths, identified as EU-04A and EU-04B; EU-04B is also known as the small parts line. Booth EU-04A has a maximum coating rate of 21.33 pounds per hour and is equipped with three (3) electrostatic applicators, only two of which can be used at any one time, exhausting through two (2) cartridge type dust collectors identified as CD-04a and CD-04b and venting back into the system as makeup air. Booth EU-04B has a maximum coating rate of 10.67 pounds per hour and is equipped with one (1) electrostatic applicator, exhausting through one (1) cartridge type dust collector identified as CD-04c and venting back into the system as make up air;
- (c) One (1) powder coating booth, identified as EU-05, with a maximum coating rate of 22.53 pounds per hour, exhausting through two (2) cartridge type dust collectors identified as CD-05a and CD-05b and venting back into the building; and
- (d) One (1) shotblaster, identified as EU-03B, utilizing steel shot, with a maximum blast rate of 4.5 tons of steel shot per hour, exhausting through cartridge type filters, identified as CD-03c and CD-03d, vented indoors;

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 Particulate Matter (PM) [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2, the particulate matter from the (1) shotblaster, identified as EU-03 shall be limited to 52.1 pounds per hour, based on a process weight rate of 108 tons of steel shot per hour.
- (b) Pursuant to 326 IAC 6-3-2, the particulate matter from the three (3) powder coating booths, identified as EU-04A, EU-04B, and EU-05 shall be limited by the following:
 - (1) No person shall operate any manufacturing process so as to produce, cause, suffer, or allow particulate to be emitted in excess of the amount shown in the table in 326 IAC 6-3-2(e). The allowable rate of emission shall be based on the process weight rate for a manufacturing process.
 - (2) When the process weight rate is less than one hundred (100) pounds per hour, the allowable rate of emission is five hundred fifty-one thousandths (0.551) pound per hour.
 - (3) When the process weight exceeds two hundred (200) tons per hour, the allowable emission may exceed that shown in the table in 326 IAC 6-3-2(e), provided the concentration of particulate in the discharge gases to the atmosphere is less than one-tenth (0.10) pound per one thousand (1,000) pounds of gases:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

- (c) Pursuant to 326 IAC 6-3-2, the particulate matter from the (1) shotblaster, identified as EU-03B shall be limited to 11.2 pounds per hour, based on a process weight rate of 4.5 tons of steel shot per hour.

D.1.2 Particulate Matter (PM) [40 CFR 52, Subpart P]

Pursuant to 40 CFR 52 Subpart P, the particulate matter (PM) from the each of the three (3) powder coating booths, identified as EU-04A, EU-04B, and EU-05, shall not exceed the pound per hour emission rate established as E in the formula below:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.1.3 PSD Minor Limits [326 IAC 2-2]

The particulate matter (PM) emissions from each of the two (2) shotblasters, identified as EU-03 and EU-03B, and each of the three (3) powder coating booths, identified as EU-04A, EU-04B, and EU-05, shall not exceed the following limits:

Emission Unit	PM PSD Limit (lbs/hour)	Equivalent PM PSD Limit (tons/year)
Shotblaster EU-03B	2.1	9.4
Shotblaster EU-03	51.0	224
Powder Coating Booth EU-04A	0.64	2.8
Powder Coating Booth EU-04B	0.32	1.4
Powder Coating Booth EU-05	0.66	2.9

These limits are required to limit the potential to emit of particulate matter (PM) to less than 250 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable

D.1.4 FESOP Limits [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4 (FESOP), PM10 from the two (2) shotblasters, identified as EU-03 and EU-03B, and the three (3) powder coating booths, identified as EU-04A, EU-04B, and EU-05, shall be limited as follows:

Emission Unit	PM-10 FESOP Limit (lbs/hour)	Equivalent PM-10 FESOP Limit (tons/year)
Shotblaster EU-03B	0.8	3.5
Shotblaster EU-03	18.9	83.0
Powder Coating Booth EU-04A	0.27	1.2
Powder Coating Booth EU-04B	0.14	0.6
Powder Coating Booth EU-05	0.30	1.3

D.1.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and its control device.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.1.6 Particulate Matter (PM)

- (a) In order to comply with D.1.1(a), D.1.3, and D.1.4, the cartridge filters for PM control shall be in operation at all times when the one (1) shotblaster, identified as EU-03 is in operation.
- (b) In order to comply with D.1.1(b), D.1.3, and D.1.4, the cartridge type dust collectors shall be in operation at all times when the three (3) powder coating booths, identified as EU-04A, EU-04B, and EU-05 are in operation.
- (c) In order to comply with D.1.1(c), D.1.3, and D.1.4, the cartridge filters for PM control shall be in operation at all times when the one (1) shotblaster, identified as EU-03B is in operation.

D.1.7 Parametric Monitoring

- (a) The Permittee shall record the total static pressure drop once per shift across each cartridge filter unit, CD-03a and CD-03b, controlling the one (1) shotblaster (EU-03) when the one (1) shotblaster (EU-03) is in operation and venting directly to the atmosphere. When for any one reading, the pressure drop across cartridge filter unit CD-03a is outside the normal range of 2.0 to 8.0 inches of water or a range established during the latest stack test and the pressure drop across filter unit CD-03b is outside the normal range of 0.5 and 2.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Failure to Take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) The Permittee shall record the total static pressure drop once per shift across each cartridge filter unit, CD-04a and CD-04b, controlling the one (1) powder coating booth (EU-04A) when the one (1) powder coating booth (EU-04A) is in operation and venting directly to the atmosphere. When for any one reading, the pressure drop across cartridge filter unit CD-04a is outside the normal range of 2.0 to 8.0 inches of water or a range established during the latest stack test and the pressure drop across filter unit CD-04b is outside the normal range of 0.5 and 2.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Failure to Take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (c) The Permittee shall record the total static pressure drop once per shift across the cartridge filter unit, CD-04c, controlling the one (1) powder coating booth (EU-04B) when the one (1) powder coating booth (EU-04B) is in operation and venting directly to the atmosphere. When for any one reading, the pressure drop across cartridge filter unit CD-04c is outside the normal range of 2.0 to 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Failure to Take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

- (d) The Permittee shall record the total static pressure drop once per shift across each cartridge filter unit, CD-05a and CD-05b, controlling the one (1) powder coating booth (EU-05) when the one (1) powder coating booth (EU-05) is in operation and venting directly to the atmosphere. When for any one reading, the pressure drop across cartridge filter unit CD-05a is outside the normal range of 2.0 to 8.0 inches of water or a range established during the latest stack test and the pressure drop across filter unit CD-05b is outside the normal range of 0.5 and 2.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Failure to Take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (e) The Permittee shall record the total static pressure drop once per shift across each cartridge filter unit, CD-03c and CD-03d, controlling the one (1) shotblaster (EU-03B) when the one (1) shotblaster (EU-03B) is in operation and venting directly to the atmosphere. When for any one reading, the pressure drop across cartridge filter unit CD-03c is outside the normal range of 2.0 to 8.0 inches of water or a range established during the latest stack test and the pressure drop across filter unit CD-03d is outside the normal range of 0.5 and 2.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Failure to Take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.8 Broken or Failed Cartridge Filter Detection

In the event that cartridge filter failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment cartridge filters, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.1.9 Cartridge Filter Inspections

An inspection shall be performed each calendar quarter of all cartridge filters controlling the two (2) shotblasters (EU-03 and EU-03B) and the three powder coating booths (EU-04A, EU-04B, and EU-05) when venting to the atmosphere. A cartridge filter inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective cartridge filters shall be replaced.

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.10 Record Keeping Requirements

- (a) To document compliance with Condition D.1.7, the Permittee shall maintain the following:
 - (1) Once per shift records of the following operational parameters during normal operation when venting directly to the atmosphere:
 - (A) Inlet and outlet differential static pressure; and
 - (B) Cleaning cycle operation.
 - (2) Documentation of the dates vents are redirected.
- (b) To document compliance with Condition D.1.9, the Permittee shall maintain records of the results of the inspections required under Condition D.1.9 and the dates the vents are redirected.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**Indiana Department of Environmental Management
Office of Air Quality**

**Technical Support Document (TSD) for a
Significant Permit Revision to a
Federally Enforceable State Operating Permit**

Source Background and Description

Source Name:	Valmont Industries, Inc.
Source Location:	57843 Charlotte Avenue, Elkhart, IN 46517
County:	Elkhart
SIC Code:	3499
Operation Permit No.:	F039-14186-00237
Operation Permit Issuance Date:	March 19, 2002
Significant Permit Revision No.:	039-20117-00237
Permit Reviewer:	Nathan C. Bell

History

Valmont Industries, Inc. was issued a renewed FESOP F039-14186-00237 on April 3, 2002 for operation of a stationary fabricated metal products facility which manufactures light poles. A letter requesting a change to the FESOP was received on December 17, 2004. The source plans to add an additional shotblaster, identified as EU-03B, of the same type as the shotblaster EU-03. Shotblaster EU-03B will comply with the same applicable requirements and permit terms and conditions as shotblaster EU-03, but will not cause the source's potential to emit to be greater than the threshold levels specified in 326 IAC 2-2 or 326 IAC 2-3. The addition of shotblaster EU-03B is considered a change by administrative amendment pursuant to 326 IAC 2-8-10(a)(14).

Upon further review of the permit, OAQ determined that the permit required revising for the following reasons:

- (a) the allowable particulate matter (PM) emission limit (326 IAC 6-3-2) of 13.83 pounds per hour for the existing shotblaster EU-03 was calculated incorrectly. The corrected particulate matter emission limit for EU-03 is 52.1 pounds per hour.
- (b) since there were no federally enforceable limits established for particulate matter (PM or PM-10) for the existing three (3) powder coating booths (EU-04A, EU-04B, EU-05), the additional uncontrolled emissions from the new shotblaster (EU-03B) would result in a source wide potential to emit of PM greater than two hundred fifty (250) tons per year. Therefore, establishment of a Prevention of Significant Deterioration (PSD) limit for each of the emission units was necessary to limit the source-wide PM emissions to less than 250 tons per year and to make the requirements of 326 IAC 2-2 not applicable. In addition, establishment of a FESOP limit for each of the emission units was necessary to limit the source-wide PM-10 emissions to less than 100 tons per year and to make the requirements of 326 IAC 2-7 not applicable.
- (c) to correct typographical errors, to further clarify the requirements of 326 IAC 6-3-2 and 40 CFR Subpart P, and to add language to Section B that addressed credible evidence.

Pursuant to the provisions of 326 IAC 2-8-11.1(g), these changes to the permit are required to be reviewed in accordance with the Significant Permit Revision procedures of 326 IAC 2-8-11.1(f).

The permit revision includes construction and operation of the following emission unit and pollution control devices:

New Emission Units and Pollution Control Equipment Receiving New Source Review Approval

The application includes information relating to the prior approval for the construction and operation of the following equipment pursuant to 326 IAC 2-8-4(11):

- (a) One (1) shotblaster, identified as EU-03B, utilizing steel shot, with a maximum blast rate of 4.5 tons of steel shot per hour, exhausting through cartridge type filters identified as CD-03c and CD-03d, vented indoors

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) One (1) shotblaster, identified as EU-03, utilizing steel shot, with a maximum blast rate of 108 tons of steel shot per hour, exhausting through cartridge type filters identified as CD-03a and CD-03b, vented indoors;
- (b) Two (2) powder coating booths, identified as EU-04A and EU-04B; EU-04B is also known as the small parts line. Booth EU-04A has a maximum coating rate of 21.33 pounds per hour and is equipped with three (3) electrostatic applicators only two of which can be used at any one time, exhausting through two (2) cartridge type dust collectors identified as CD-04a and CD-04b and venting back into the system as make up air. Booth EU-04B has a maximum coating rate of 10.67 pounds per hour and is equipped with one (1) electrostatic applicator, exhausting through one (1) cartridge type dust collector identified as CD-04c and venting back into the system as make up air;
- (c) One (1) powder coating booth, identified as EU-05, with a maximum coating rate of 22.53 pounds per hour, exhausting through two (2) cartridge type dust collectors identified as CD-05a and CD-05b and venting back into the building; and
- (d) This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):
 - (1) One (1) natural gas fired air make-up unit, with a maximum rated capacity of 3.3 million British thermal units per hour;
 - (2) One (1) natural gas fired air make-up unit, with a maximum rated capacity of 2.2 million British thermal units per hour
 - (3) One (1) natural gas fired heating unit, with a maximum rated capacity of 3.0 million British thermal units per hour;
 - (4) Two (2) natural gas fired bake ovens, each oven with a maximum rated capacity of 3.0 million British thermal units per hour;
 - (5) Two (2) air make-up air units, each with a maximum rated capacity of 9.0 mmBtu/hr;
 - (6) MIG welding stations;
 - (7) Gas metal arc welding;
 - (8) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month;

- (9) Paved and unpaved roads and parking lots with public access;
- (10) Burn tables;
- (11) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors, and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including one (1) buffing unit equipped with a dust collector, with a maximum flow rate of 1,400 acfm and a grain loading of less than 0.03 grains per cubic foot;
- (12) Oxyacetylene cutting torches;
- (13) Cutting of metal parts;
- (14) Aluminum wipe down operation;
- (15) Hot aluminum extrusion process with no significant emissions, consisting of a die cleaning process to clean metal dies (this process will use NaOH in the cleaning process and no regulated pollutants will be emitted); and
- (16) One chip collector associated with the new hot aluminum extrusion process with two (2) cold cut saws, and [The hot aluminum extrusion process, addressed in the administrative amendment submitted on June 1, 2000, included a chip collector from an aluminum saw. Particle size testing on the material collected by the chip collector indicates that 0.36% of the material is \leq 100 microns and 0.13% of the material is \leq 10 microns with a PTE of $<$ 5 TPY for both 100 and 10 microns classifying this as an insignificant activity.] one (1) hot cut saw without a chip collector.

Existing Approvals

The source was issued a renewed FESOP F039-14186-00237 on April 3, 2002. The source has since received the following:

- (a) First Administrative Amendment No. 039-16924-00237, issued on April 3, 2003; and
- (b) Second Administrative Amendment No. 039-17645-00237, issued on November 13, 2003;

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Significant Permit Revision, be approved. This recommendation is based on the following facts and conditions:

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 17, 2004. Additional information was received from the source's consultant, Bruce Carter and Associates, on February 7, 2005.

Emission Calculations

Detailed emissions calculations for the new one (1) shotblaster (EU-03B), the existing one (1) shotblaster (EU-03), and the existing three (3) powder coating booths (EU-04A, EU-04B, EU-05) are

provided in Appendix A of this TSD (Appendix A, pages 1 through 2). See the Existing Approvals for detailed emissions calculations for the insignificant activities.

Potential To Emit Before Controls of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.

This table reflects the potential to emit (PTE) before controls for the modification (new shotblaster EU-03B).

Pollutant	Potential To Emit of Modification (tons/year)
PM	157.7
PM10	135.6
SO2	0
NOx	0
VOC	0
CO	0
TOTAL HAPs	0
Worst Single HAP	0

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM/PM10 are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7. The source agrees to limit emissions from the entire source to below Title V levels and, consequently, will be issued a FESOP.
- (b) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) emissions are not counted toward determination of PSD and Emission Offset applicability.

Justification for Modification

The FESOP is being modified through a Significant Permit Revision. This revision is being performed pursuant to 326 IAC 2-8-11.1(g)(2). Any modifications that change any existing requirements for the units or processes under an emission cap limitation(s) is required to be significant.

Potential to Emit After Issuance for the Modification

The source has opted to remain a FESOP source. The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of the FESOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential to Emit (PTE) of Modification After Issuance (tons/year)						
Process/facility	PM	PM10	SO ₂	NO _x	VOC	CO	HAPs
New Additional Shotblaster EU-03B	9.4**	3.5*	0	0	0	0	0
PSD Threshold Level	250	250	250	250	250	250	N/A

	Potential to Emit (PTE) of Source After Issuance (tons/year)						
Process/facility	PM	PM10	SO ₂	NO _x	VOC	CO	HAPs
New Additional Shotblaster EU-03B	9.4*	3.5**	0	0	0	0	0
Existing Shotblaster EU-03	224*	83**	0	0	0	0	0
Existing Powder Coating Booth EU-04A	2.8*	1.2**	0	0	0	0	0
Existing Powder Coating Booth EU-04B	1.4*	0.6**	0	0	0	0	0
Existing Powder Coating Booth EU-05	2.9*	1.3**	0	0	0	0	0
Existing Natural Gas Combustion Sources	0.3	1.1	0.1	14.2	0.8	12.0	0
Existing Insignificant Sources	8.0	8.0	0	0	0	0	0
Total PTE for Source after Issuance	249	99	0.1	14.2	0.8	12.0	0
FESOP Threshold Level	N/A	100	100	100	100	100	N/A
PSD Threshold Level	250	250	250	250	250	250	N/A

* Each emission unit is limited as indicated to render 326 IAC 2-2 (PSD) not applicable.

** Each emission unit is limited as indicated to comply with 326 IAC 2-8 (FESOP).

- (a) This modification to an existing minor stationary source is not major because the emission increase of the modification is less than the PSD major source threshold levels. The source, including the emissions of the modification, is still a minor stationary source. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
- (b) This existing minor stationary source will not change the PSD minor status after the modification because the emissions from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM10	Attainment or Unclassifiable
SO ₂	Attainment
NO ₂	Attainment or Unclassifiable
1-Hour Ozone	Maintenance Attainment
8-Hour Ozone	Basic Nonattainment
CO	Attainment or Unclassifiable
Lead	Attainment or Unclassifiable

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) 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 NOx emissions are considered when evaluating the rule applicability relating to the ozone standard. Elkhart County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for nonattainment new source review.
- (b) Elkhart County has been classified as attainment or unclassifiable for all the other regulated criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.
- (c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 or 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	47.3
PM10	42.8
SO2	0.1
NOx	14.2
VOC	0.8
CO	12.0
Single HAP	0.0
Total HAPs	0.0

- (a) This existing source is not an Emission Offset major stationary source because no regulated nonattainment pollutant is emitted at a rate of 100 tons per year or greater
- (b) This existing source is not a major PSD stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Federal Rule Applicability (Modification)

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) included for this modification.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) included for this modification.

State Rule Applicability (Modification)

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This modification is not subject to the requirements of this rule. As shown in Potential to Emit After Issuance for the Modification above, the allowable emissions of all any attainment regulated pollutants, except PM, are less than 100 tons per year after application of all federally enforceable emission limits. The allowable emissions of PM are less than 250 tons per year after application of all

federally enforceable emission limits. This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2. Therefore the requirements of 326 IAC 2-2 (PSD) do not apply.

326 IAC 2-3 (Emission Offset)

The requirements of 326 IAC 2-3 (Emission Offset) apply to major sources or major modifications constructed in an area designated as non-attainment. The uncontrolled potential to emit of VOC and NOx are each less than 100 tons per year. The requirements of 326 IAC 2-3 (Emission Offset) are not applicable.

326 IAC 2-8-4 (FESOP)

This source is subject to 326 IAC 2-8-4 (FESOP). Pursuant to this rule, PM10 emission from each of the three (3) powder coating booths (EU-04A, EU-04B, and EU-05) and each of the two (2) shotblasters (EU-03 and EU-03B), shall be limited as follows:

Emission Unit	PM-10 FESOP Limit (lbs/hour)	Equivalent PM-10 FESOP Limit (tons/year)
Shotblaster EU-03B	0.8	3.5
Shotblaster EU-03	18.9	83.0
Powder Coating Booth EU-04A	0.27	1.2
Powder Coating Booth EU-04B	0.14	0.6
Powder Coating Booth EU-05	0.30	1.3

This will limit the source-wide PM10 emissions to less than 100 tons per 12 consecutive month period. Therefore, the requirements of 326 IAC 2-7 do not apply.

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:

- (a) Opacity shall not exceed an average of forty percent (40%) 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) in a six (6) hour period 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.

State Rule Applicability - Individual Facilities (Modification)

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

- (a) Shotblaster EU-03 is not a new unit, however the allowable emission rate has been changed as follows:

The requirements of 326 IAC 6-3-2 are applicable to the one (1) existing shotblaster, identified as EU-03. Pursuant to 326 IAC 6-3-2, the particulate matter from the one (1) shotblaster, identified as EU-03, shall be limited to 52.1 pounds per hour, based on a process weight rate of 108 tons of steel shot per hour.

Interpolation and extrapolation of the data for the process weight rates in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The two (2) cartridge filters (CD-03a and CD-03b) shall be in operation at all times shotblaster EU-03 is in operation, in order to comply with this limit.

- (b) Powder coating booths, EU-04A, EU-04B, and EU-05, are not new units, however additional language related to 326 IAC 6-3 has been added as follows:

The requirements of 326 IAC 6-3 are applicable to each of the three powder coating booths (EU-04A, EU-04B, and EU-05). Pursuant to 326 IAC 6-3-2(e)(2), any manufacturing process not exempt under 326 IAC 6-3-1(b) or (c) and to which the control methods in 326 IAC 6-3-2 (b) through (d) do not apply shall calculate allowable particulate emissions as follows:

- (1) No person shall operate any manufacturing process so as to produce, cause, suffer, or allow particulate to be emitted in excess of the amount shown in the table in 326 IAC 6-3-2(e)(2). The allowable rate of emission shall be based on the process weight rate for a manufacturing process.
- (2) When the process weight rate is less than one hundred (100) pounds per hour, the allowable rate of emission is five hundred fifty-one thousandths (0.551) pound per hour.
- (3) When the process weight exceeds two hundred (200) tons per hour, the allowable emission may exceed that shown in the table in 326 IAC 6-3-2(e)(2), provided the concentration of particulate in the discharge gases to the atmosphere is less than one-tenth (0.10) pound per one thousand (1,000) pounds of gases:

In order to comply with the allowable rate of emission, the two (2) cartridge type dust collectors (CD-04a and CD-04b) shall be in operation at all times powder coating booth EU-04A is in operation, the one (1) cartridge type dust collector (CD-04c) shall be in operation at all times powder coating booth EU-04B is in operation, and the two (2) cartridge type dust collectors (CD-05a and CD-05b) shall be in operation at all times powder coating booth EU-05 is in operation. The allowable rate of emission can be calculated as follows:

Interpolation of the data in the table in 326 IAC 6-3-2(e)(2) for the process weight rates up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour, and} \\ P = \text{process weight rate in tons per hour}$$

- (c) The requirements of 326 IAC 6-3-2 are applicable to the one (1) new shotblaster, identified as EU-03B. Pursuant to 326 IAC 6-3-2, the particulate matter from the one (1) shotblaster, identified as EU-03B, shall be limited to 11.2 and pounds per hour, based on a process weight rate of 4.5 tons of steel shot per hour.

Interpolation and extrapolation of the data for the process weight rates in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The two (2) cartridge filters (CD-03c and CD-03d) shall be in operation at all times shotblaster EU-03B is in operation, in order to comply with this limit.

40 CFR 52 Subpart P (Indiana SIP)

On June 12, 2002, revisions to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) became effective; this rule was previously referred to as 326 IAC 6-3 (Process Operations). As of the date this permit is being issued these revisions have not been approved by EPA into the Indiana State Implementation Plan (SIP); therefore, the following requirement from the previous version of 326 IAC 6-3 (Process Operations), which has been approved into the SIP, will remain an applicable requirement until the revisions to 326 IAC 6-3 are approved into the SIP and the condition is modified in a subsequent permit action. Therefore, the source shall comply as follows:

Pursuant to 40 CFR 52 Subpart P, the particulate matter (PM) from the each of the three (3) powder coating booths, identified as EU-04A, EU-04B, and EU-05, shall not exceed the pound per hour emission rate established as E in the formula below:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

Testing Requirements

Based on the particulate matter emissions for the modification, testing is not required for the modification.

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

All compliance requirements from previous approvals were incorporated into this FESOP. The compliance monitoring requirements applicable to this source are as follows:

The one two (12) shotblasters (EU-03 and EU-03B) and the three powder coating booths (EU-04A, EU-04B, and EU-05) have applicable compliance monitoring conditions as specified below:

1. Parametric Monitoring
 - (a) The Permittee shall record the total static pressure drop once per shift across each cartridge filter unit, CD-03a and CD-03b controlling the one (1) shotblaster (EU-03) when the one (1) shotblaster (EU-03) is in operation and venting directly to the atmosphere. When for any one reading, the pressure drop across cartridge filter unit CD-03a is outside the normal range of 2.0 to 8.0 inches of water or a range established during the latest stack test and the pressure drop across filter unit CD-03b is outside the normal range of 0.5 and 2.0 inches of water or a range established

during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Failure to Take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

- (b) The Permittee shall record the total static pressure drop once per shift across each cartridge filter unit, CD-04a and CD-04b, controlling the one (1) powder coating booth (EU-04A) when the one (1) powder coating booth (EU-04A) is in operation and venting directly to the atmosphere. When for any one reading, the pressure drop across cartridge filter unit CD-04a is outside the normal range of 2.0 to 8.0 inches of water or a range established during the latest stack test and the pressure drop across filter unit CD-04b is outside the normal range of 0.5 and 2.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Failure to Take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (c) The Permittee shall record the total static pressure drop once per shift across the cartridge filter unit, CD-04c, controlling the one (1) powder coating booth (EU-04B) when the one (1) powder coating booth (EU-04B) is in operation and venting directly to the atmosphere. When for any one reading, the pressure drop across cartridge filter unit CD-04c is outside the normal range of 2.0 to 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Failure to Take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (d) The Permittee shall record the total static pressure drop once per shift across each cartridge filter unit, CD-05a and CD-05b, controlling the one (1) powder coating booth (EU-05) when the one (1) powder coating booth (EU-05) is in operation and venting directly to the atmosphere. When for any one reading, the pressure drop across cartridge filter unit CD-05a is outside the normal range of 2.0 to 8.0 inches of water or a range established during the latest stack test and the pressure drop across filter unit CD-05b is outside the normal range of 0.5 and 2.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Failure to Take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (e) The Permittee shall record the total static pressure drop once per shift across each cartridge filter unit, CD-03c and CD-03d, controlling the one (1) shotblaster (EU-03B) when the one (1) shotblaster (EU-03B) is in operation and venting directly to the atmosphere. When for any one reading, the pressure drop across cartridge filter unit CD-03c is outside the normal range of 2.0 to 8.0 inches of water or a range established during the latest stack test and the pressure drop across filter unit CD-03d is outside the normal range of 0.5 and 2.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Failure to Take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section

C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

2. Cartridge Filter Inspections

An inspection shall be performed each calendar quarter of all cartridge filters controlling the two (2) shotblasters (EU-03 and EU-03B) and the three powder coating booths (EU-04A, EU-04B, and EU-05) when venting to the atmosphere. A cartridge filter inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective cartridge filters shall be replaced.

3. Broken or Failed Cartridge Filter Detection

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment cartridge filters, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

These monitoring conditions are necessary because the each of the cartridge filters must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations), 326 IAC 2-2 (Prevention of Significant Deterioration), and 326 IAC 2-8 (FESOP).

Changes to the permit:

Each of the changes made to permit are described below:

- (a) Addition of new shotblaster, EU-03B, description to Sections A.2 and D.1;
- (b) Addition of new language as Section B.25 that addresses credible evidence. In accordance with the credible evidence rule (62 Fed. Reg. 8314, Feb 24, 1997); Section 113(a) of the Clean Air Act, 42 U.S. C. § 7413 (a); and a letter from the United States Environmental Protection Agency (USEPA) to IDEM, OAQ dated May, 18 2004, all permits must address the use of credible evidence;
- (c) Change 326 IAC 6-3-2 particulate limit for existing shotblaster EU-03 from 13.83 pounds per hour to 52.1 pounds per hour to correct a typographical error;
- (d) Change text of D.1.1 from "two (2) powder coating booths, identified as EU-04A, EU-04B, and EU-05" to "three (3) powder coating booths, identified as EU-04A, EU-04B,

and EU-05” to correct a typographical error;

- (e) Add language to D.1.1 for existing powder coating booths (EU-04A, EU-04B, and EU-05) in order to clarify the requirements of 326 IAC 6-3-2;
- (f) Add language to D.1.1 for new shotblaster, EU-03B, in order to include the requirements of 326 IAC 6-3-2;
- (g) Add language as “D.1.2 Particulate Matter (PM) [40 CFR 52, Subpart P]” for existing powder coating booths (EU-04A, EU-04B, and EU-05) in order to clarify the requirements from the previous version of 326 IAC 6-3 (Process Operations), which is approved in the State Implementation Plan (SIP);
- (h) Add Prevention of Significant Deterioration (PSD) limit for each of the two (2) shotblasters (EU-03 and EU-03B) and the three powder coating booths (EU-04A, EU-04B, and EU-05) in order to limit the source-wide PM emissions to less than 250 tons per year and to make the requirements of 326 IAC 2-2 not applicable
- (i) Revise FESOP limits for existing shotblaster, EU-03, and add FESOP limits for the new shotblaster (EU-03B) and three powder coating booths (EU-04A, EU-04B, EU-05) in order to limit the source-wide PM-10 emissions to less than 100 tons per year and to make the requirements of 326 IAC 2-7 not applicable;
- (j) Add Compliance Monitoring Requirements for new shotblaster (EU-03B) and three powder coating booths (EU-04A, EU-04B, EU-05);
- (k) Renumber conditions and update references to conditions, as necessary;

As described above, the following changes have been made to the permit, with deleted language as ~~strikeouts~~ and new language **bolded**

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

- (d) **One (1) shotblaster, identified as EU-03B, utilizing steel shot, with a maximum blast rate of 4.5 tons of steel shot per hour, exhausting through cartridge type filters, identified as CD-03c and CD-03d, vented indoors;**

B.25 Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [62 FR 8314]

Notwithstanding the conditions of this permit that state specific methods that may be used to demonstrate compliance with, or a violation of, applicable requirements, any person (including the Permittee) may also use other credible evidence to demonstrate compliance with, or a violation of, any term or condition of this permit.

C.1 Overall Source Limits [326 IAC 2-8] [326 IAC 2-2]

The purpose of this permit is to limit this source=s potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period.
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
- (b) **Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.**
- (bc) ~~This~~**These** conditions shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source=~~s~~ potential to emit does not exceed the above specified limits.
- (ed) Section D of this permit contains independently enforceable provisions to satisfy ~~this~~ **these** requirements.

SECTION D.1 FACILITY OPERATION CONDITIONS

<p>Facility Description [326 IAC 2-8-4(10)]: (d) One (1) shotblaster, identified as EU-03B, utilizing steel shot, with a maximum blast rate of 4.5 tons of steel shot per hour, exhausting through cartridge type filters, identified as CD-03c and CD-03d, vented indoors; (The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)</p>
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D.1.1 Particulate Matter (PM) [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2, the particulate matter from the (1) shotblaster, identified as EU-03 shall be limited to ~~43.83~~**52.1** pounds per hour, based on a process weight rate of 108 tons of steel shot per hour.
- (b) Pursuant to 326 IAC 6-3-2, the particulate matter from the ~~two-three~~ **(23)** powder coating booths, identified as EU-04A, EU-04B, and EU-05 shall be limited by the following:
 - (1) **No person shall operate any manufacturing process so as to produce, cause, suffer, or allow particulate to be emitted in excess of the amount shown in the table in 326 IAC 6-3-2(e). The allowable rate of emission shall be based on the process weight rate for a manufacturing process.**
 - (2) **When the process weight rate is less than one hundred (100) pounds per hour, the allowable rate of emission is five hundred fifty-one thousandths (0.551) pound per hour.**
 - (3) **When the process weight exceeds two hundred (200) tons per hour, the allowable emission may exceed that shown in the table in 326 IAC 6-3-2(e), provided the concentration of particulate in the discharge gases to the atmosphere is less than one-tenth (0.10) pound per one thousand (1,000) pounds of gases:**

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

- (c) **Pursuant to 326 IAC 6-3-2, the particulate matter from the (1) shotblaster,**

identified as EU-03B shall be limited to 11.2 pounds per hour, based on a process weight rate of 4.5 tons of steel shot per hour.

D.1.2 Particulate Matter (PM) [40 CFR 52, Subpart P]

Pursuant to 40 CFR 52 Subpart P, the particulate matter (PM) from the each of the three (3) powder coating booths, identified as EU-04A, EU-04B, and EU-05, shall not exceed the pound per hour emission rate established as E in the formula below:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and } P = \text{process weight rate in tons per hour}$$

D.1.3 PSD Minor Limits [326 IAC 2-2]

The particulate matter (PM) emissions from each of the two (2) shotblasters, identified as EU-03 and EU-03B, and each of the three (3) powder coating booths, identified as EU-04A, EU-04B, and EU-05, shall not exceed the following limits:

Emission Unit	PM PSD Limit (lbs/hour)	Equivalent PM PSD Limit (tons/year)
Shotblaster EU-03B	2.1	9.4
Shotblaster EU-03	51.0	224
Powder Coating Booth EU-04A	0.64	2.8
Powder Coating Booth EU-04B	0.32	1.4
Powder Coating Booth EU-05	0.66	2.9

These limits are required to limit the potential to emit of particulate matter (PM) to less than 250 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable

D.1.24 FESOP Limits [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4 (FESOP), PM10 from the ~~one~~two (2) shotblasters, identified as EU-03 and EU-03B, and the three (3) powder coating booths, identified as EU-04A, EU-04B, and EU-05, shall be limited as follows: ~~to 7.43 pounds per hour, which is equivalent to 32.55 tons of PM10 per year.~~

Emission Unit	PM-10 FESOP Limit (lbs/hour)	Equivalent PM-10 FESOP Limit (tons/year)
Shotblaster EU-03B	0.8	3.5
Shotblaster EU-03	18.9	83.0
Powder Coating Booth EU-04A	0.27	1.2
Powder Coating Booth EU-04B	0.14	0.6
Powder Coating Booth EU-05	0.30	1.3

D.1.35 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.1.46 Particulate Matter (PM)

(a) In order to comply with D.1.1(a), D.1.3, and D.1.4, the cartridge filters for PM control

shall be in operation at all times when the one (1) shotblaster, identified as EU-03 is in operation.

- (b) In order to comply with D.1.1(b), **D.1.3, and D.1.4**, the cartridge type dust collectors shall be in operation at all times when the three (3) powder coating booths, identified as EU-04A, EU-04B, and EU-05 are in operation.
- (c) **In order to comply with D.1.1(c), D.1.3, and D.1.4, the cartridge filters for PM control shall be in operation at all times when the one (1) shotblaster, identified as EU-03B is in operation.**

D.1.57 Parametric Monitoring

- (a) The Permittee shall record the total static pressure drop once per shift across each cartridge filter unit, CD-03a and CD-03b, controlling the one (1) shotblaster (EU-03) when the one (1) shotblaster (EU-03) is in operation and venting directly to the atmosphere. When for any one reading, the pressure drop across cartridge filter unit CD-03a is outside the normal range of 2.0 to 8.0 inches of water or a range established during the latest stack test and the pressure drop across filter unit CD-03b is outside the normal range of 0.5 and 2.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Failure to Take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) **The Permittee shall record the total static pressure drop once per shift across each cartridge filter unit, CD-04a and CD-04b, controlling the one (1) powder coating booth (EU-04A) when the one (1) powder coating booth (EU-04A) is in operation and venting directly to the atmosphere. When for any one reading, the pressure drop across cartridge filter unit CD-04a is outside the normal range of 2.0 to 8.0 inches of water or a range established during the latest stack test and the pressure drop across filter unit CD-04b is outside the normal range of 0.5 and 2.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Failure to Take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.**
- (c) **The Permittee shall record the total static pressure drop once per shift across the cartridge filter unit, CD-04c, controlling the one (1) powder coating booth (EU-04B) when the one (1) powder coating booth (EU-04B) is in operation and venting directly to the atmosphere. When for any one reading, the pressure drop across cartridge filter unit CD-04c is outside the normal range of 2.0 to 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Failure to Take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.**
- (d) **The Permittee shall record the total static pressure drop once per shift across each cartridge filter unit, CD-05a and CD-05b, controlling the one (1) powder coating booth (EU-05) when the one (1) powder coating booth (EU-05) is in operation and venting directly to the atmosphere. When for any one reading,**

the pressure drop across cartridge filter unit CD-05a is outside the normal range of 2.0 to 8.0 inches of water or a range established during the latest stack test and the pressure drop across filter unit CD-05b is outside the normal range of 0.5 and 2.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Failure to Take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

- (e) **The Permittee shall record the total static pressure drop once per shift across each cartridge filter unit, CD-03c and CD-03d, controlling the one (1) shotblaster (EU-03B) when the one (1) shotblaster (EU-03B) is in operation and venting directly to the atmosphere. When for any one reading, the pressure drop across cartridge filter unit CD-03c is outside the normal range of 2.0 to 8.0 inches of water or a range established during the latest stack test and the pressure drop across filter unit CD-03d is outside the normal range of 0.5 and 2.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Failure to Take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.**

D.1.68 Broken or Failed Cartridge Filter Detection

D.1.79 Cartridge Filter Inspections

An inspection shall be performed each calendar quarter of all cartridge filters controlling the ~~one~~ **two (42) shotblasters (EU-03 and EU-03B) and the three powder coating booths (EU-04A, EU-04B, and EU-05)** when venting to the atmosphere. A cartridge filter inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective cartridge filters shall be replaced.

D.1.810 Record Keeping Requirements

- (a) To document compliance with Condition D.1.57, the Permittee shall maintain the following:
- (1) Once per shift records of the following operational parameters during normal operation when venting directly to the atmosphere:
 - (A) Inlet and outlet differential static pressure; and
 - (B) Cleaning cycle operation.
 - (2) Documentation of the dates vents are redirected.
- (b) To document compliance with Condition D.1.79, the Permittee shall maintain records of the results of the inspections required under Condition D.1.79 and the dates the vents are redirected.

Conclusion

The operation of this source shall be subject to the conditions of the attached proposed FESOP Significant Permit Revision No. 039-20117-00237.

**Appendix A: Emission Calculations
Abrasive Blasting**

**Company Name: Valmont Industries, Inc.
Address City IN Zip: 58027 Charlotte Avenue, Elkhart, IN 46517
Operation Permit No.: F039-14861
Plt ID: 039-00237
Significant Permit Revision No.: 039-20117-00237
Reviewer: Nathan Bell
Date: February 24, 2005**

Emission Factors for Abrasives:

Abrasive	Emission Factor	
	lb PM/ lb abrasive	lb PM-10/ lb PM
Sand	0.041	0.7
Grit	0.01	0.7
Steel Shot	0.004	0.86
Other	0.01	

Potential To Emit (tons/yr):

Emission Unit	Maximum Throughput (lbs/hr)	Type of Shot	Uncontrolled PM Emissions (tons/yr)	Uncontrolled PM-10 Emissions (tons/yr)*	Cartridge Filter Control Efficiency	Controlled PM Emissions (tons/yr)	Controlled PM-10 Emissions (tons/yr)*
Existing EU-03	216000	steel	3784.3	3254.5	99.0%	37.84	32.55

*The existing shotblaster EU-03B was limited to 32.55 tons PM-10 per year in the FESOP No. 039-14186-00237

Emission Unit	Maximum Throughput (lbs/hr)	Type of Shot	Uncontrolled PM Emissions (tons/yr)	Uncontrolled PM-10 Emissions (tons/yr)	Cartridge Filter Control Efficiency	Controlled PM Emissions (tons/yr)	Controlled PM-10 Emissions (tons/yr)
New EU-03B	9000	steel	157.7	135.6	99.0%	1.6	1.4

Methodology:

PM Potential To Emit (ton/yr) = maximum abrasive throughput (lb/hr) * emission factor (lb PM/lb abrasive) * (8,760 hr/yr) * (1 ton/2,000 lb)

PM-10 Potential To Emit (ton/yr) = PM Potential To Emit (ton/yr) * (0.86 lb PM10/lb PM)

Controlled Emissions (ton/yr) = Potential To Emit (ton/yr) * (1 - control efficiency)

Emission Factors are from Stappa/Alapco, 1991, Section 3, "Abrasive Blasting"

326 IAC 6-3-2 Compliance Calculations:

Emission Unit	Process Weight (tons/hr)	Allowable Emission Rate (lbs/hr)	Uncontrolled PM Emissions (lb/hr)	Controlled PM Emissions (lb/yr)
EU-03	108.0	52.1	864.0	8.6
EU-03B	4.5	11.2	36.0	0.4

Methodology:

EU-03: $E = 55.0 * P^{0.11} - 40$ (For process weights exceeding 60,000 lb/hr)

EU-03B: $E = (4.10 * P^{0.67})$ (For process weights up to 60,000 lbs/hr)

where: E = allowable emission rate in lbs/hr

P = process weight in tons/hr

Each emission rate (lbs/hr) complies with the allowable emission rate (lbs/hr) of 326 IAC 6-3-2.

**Appendix A: Emission Calculations
Powder Coating**

Company Name: Valmont Industries, Inc.
Address City IN Zip: 58027 Charlotte Avenue, Elkhart, IN 46517
Operation Permit No.: F039-14861
Plt ID: 039-00237
Significant Permit Revision No.: 039-20117-00237
Reviewer: Nathan Bell
Date: February 24, 2005

Potential To Emit (PTE)

Process	Maximum Material Usage (lbs/hr)	Worse Case Transfer Efficiency	Uncontrolled PTE (lbs/hr)	Uncontrolled PTE (tons/yr)	Cartridge Filter Control Efficiency	Controlled PTE (tons/yr)
Powder Coating (EU-04A)	21.3	50.0%	10.7	46.7	99.0%	0.47
Powder Coating (EU-04B)	10.7	50.0%	5.3	23.4	99.0%	0.23
Powder Coating (EU-05)	22.5	50.0%	11.3	49.3	99.0%	0.49
Totals				119.4		1.19

Methodology

PTE Before Controls (ton/yr) = Material Usage lbs/hr * Transfer Efficiency * 8,760 hrs/yr * 1 ton/2,000 lbs

PTE After Controls (ton/yr) = PTE Before Controls * (1 - control efficiency)