



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: May 1, 2007
RE: IKG Industries / 033-24347-00099
FROM: Nisha Sizemore
Chief, Permits Branch
Office of Air Quality

Notice of Decision – Approval

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 326 IAC 2, this approval was effective immediately upon submittal of the application.

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 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days from 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-AM.dot 03/23/06



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204-2251
(317) 232-8603
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May 1, 2007

John Pastorial
IKG Industries
1801 Forrest Park Drive,
Garrett, IN 46738

Re: Exempt Operation Status,
033-24347-00099

Dear Mr. Pastorial:

The application from IKG Industries, received on February 21, 2007, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2 1.1-3, it has been determined that the following steel bar grating manufacturing plant, to be located at 1801 Forrest Park Drive, Garrett, Indiana, is classified as registered:

- (a) One (1) powder coat line, with a maximum capacity of 8,000 lbs/hr, constructed in 2006, including:
 - (1) One (1) powder coating booth, with a maximum coating rate of 50 pounds of powder per hour, equipped with an electrostatic air atomization spray application system. Waste powder is collected by a fabric filter for reuse.
 - (2) One (1) natural gas-fired oven with a maximum heat input rate of 5.175 MMBtu/hr exhausting to vents #1 and #2.

The following conditions shall be applicable:

- (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:
 - (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.
- (2) Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions) the Permittee 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).

- (3) The fabric filter is considered an integral part of the powder coating booth; therefore, particulate from the powder coating booth shall be controlled by the fabric filter at all times that the powder coating booth is in operation.

This exemption is the first air approval issued to this source.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Pursuant to Contract No. A305-5-65, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Bryan Lange, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7854 to speak directly to Mr. Lange. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, Indianapolis, Indiana, 46204-2251 or call (800) 451-6027, ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Origin signed by

Nisha Sizemore, Chief
Permits Branch
Office of Air Quality

ERG/BL

cc: File - DeKalb County
DeKalb County Health Department
Air Compliance - Doyle Houser
Northern Regional Office
Permit Tracking
Compliance Data Section
Billing, Licensing, and Training - Dan Stamatkin

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

Technical Support Document (TSD) for an Exemption

Source Background and Description

Source Name:	IKG Industries
Source Location:	1801 Forrest Park Drive, Garrett, IN 46738
County:	DeKalb
SIC Code:	3446
Permit No.:	E033-24347-00099
Permit Reviewer:	ERG/BL

The Office of Air Quality (OAQ) has reviewed an application from IKG Industries relating to the construction and operation of steel bar grating manufacturing plant.

Unpermitted Emission Units and Pollution Control Equipment

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

- (a) One (1) powder coat line, with a maximum capacity of 8,000 lbs/hr, constructed in 2006, including:
 - (1) One (1) powder coating booth, with a maximum coating rate of 50 pounds of powder per hour, equipped with an electrostatic air atomization spray application system. Waste powder is collected by a fabric filter for reuse.
 - (2) One (1) natural gas-fired oven with a maximum heat input rate of 5.175 MMBtu/hr exhausting to vents #1 and #2.

Existing Approvals

This exemption will be the first air approval issued to this source.

Air Pollution Control Justification as an Integral Part of the Process

The company had submitted the following justification for considering the powder coating recovery system as an integral part of the powder coating booth:

The powder coating recovery system (consisting of both a primary and secondary filter) should be considered integral to the normal operation of the coating booth, since there is significant economic benefit gained by collecting and re-using the powder coating. Based on a total annual operational cost for the recovery system of \$1,168, a powder coating unit cost of \$1.96 per pound, and a powder re-use rate of 25 pounds per hour, the number of hours needed each year to recover the annual operational cost would be approximately 60 hours (2.5 days).

IDEM, OAQ has evaluated the justification and agreed that the powder coating recovery system described above will be considered as an integral part of the coating booth. Therefore, the permitting level will be determined using the potential to emit after the powder coating recovery system. Particulate from the coating booth shall be controlled by the powder coating recovery

system at all times that the coating booth is in operation, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (°F)
Vent #1	Curing Oven	30	1.5	300	500
Vent #2	Curing Oven	30	1 x 1.3 (rectangular)	3,017	500

Recommendation

The staff recommends to the Commissioner that the operation 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.

A complete application for the purposes of this review was received on February 21, 2007.

Emission Calculations

See Appendix A of this document for detailed emission calculations pages 1 through 4.

Potential to Emit of the Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit 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, the department, or the appropriate local air pollution control agency."

Pollutant	Potential to Emit (tons/yr)
PM	1.05
PM-10	1.18
SO ₂	0.01
VOC	0.12
CO	1.87
NO _x	2.22

HAPs	Potential to Emit (tons/yr)
Hexane	0.04
Combination HAPs	0.04

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM, PM-10, SO₂, VOC, CO, and NO_x are less than the thresholds in 326 IAC 2-1.1-3(e). Therefore this source is subject to the provisions of 326 IAC 2-1.1-3.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than one (1) ton per year and the potential to emit of a combination of HAPs is less than two and one-half (2.5) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3. An exemption will be issued.
- (c) **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) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

County Attainment Status

The source is located in DeKalb County.

Pollutant	Status
PM-10	Attainment
PM2.5	Attainment
SO ₂	Attainment
NO ₂	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

Note: 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.

- (a) DeKalb County has been classified as unclassifiable or attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM2.5 emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as a surrogate for PM2.5 emissions. See the State Rule Applicability - Entire Source section.
- (b) Volatile organic compounds (VOC) and Nitrogen Oxides emissions 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. DeKalb County has been designated as attainment or unclassifiable for the 8-hour ozone standard. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability - Entire Source section.
- (c) DeKalb County has been classified as attainment or unclassifiable in Indiana for SO₂, NO₂, CO, and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability - Entire Source section.
- (d) **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

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

Pollutant	Emissions (tons/yr)
PM	1.05
PM-10	1.18
SO ₂	0.01
VOC	0.12
CO	1.87
NO _x	2.22
Hexane	0.04
Combination HAPs	0.04

- (a) This new source is not a major stationary source because no attainment 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.
- (b) These emissions were based on the application submitted by the company.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons per year.

This is the first air approval issued to this source.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this exemption.
- (b) The requirements of the NSPS, 40 CFR Part 60, Subpart D, Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971 (326 IAC 12) are not included in this permit because the heat input of the natural gas-fired oven (5.175 MMBtu/hr) is less than 250 MMBtu/hr.
- (c) The requirements of the NSPS, 40 CFR Part 60, Subpart Dc, Small Industrial-Commercial-Institutional Steam Generating Units (326 IAC 12) are not included in this permit because the maximum design input capacity of the natural gas-fired oven is less than 10 MMBtu/hr.

- (d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14 and 40 CFR Parts 61 and 63) included in this exemption.
- (e) The requirements of the NESHAP, 40 CFR 63, Subpart M, for the Miscellaneous Metal Parts and Products Surface Coating (326 IAC 20-31) are not included in this exemption because the source is not a major source of HAPs.

State Rule Applicability – Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

This source is located in DeKalb County, which is classified as attainment for all criteria pollutants, has the potential to emit of attainment pollutants less than two hundred fifty (250) tons per year, and is not one of the twenty-eight (28) listed source categories. Therefore, 326 IAC 2-2 does not apply.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

This source has the potential to emit less than ten (10) tons per year of a single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)

This source is located in DeKalb County, is not required to operate under a Part 70 permit, and emits less than five (5) tons per year of lead. Therefore, pursuant to 326 IAC 2-6-1(b), the source is only subject to additional information requests as provided in 326 IAC 2-6-5.

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 the 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.

326 IAC 6-4 (Fugitive Dust Emissions Limitations)

The Permittee 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).

State Rule Applicability – Powder Coating

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

Pursuant to 326 IAC 6-3-1(b)(14), the powder coating booth is exempt from the requirements of 326 IAC 6-3, because it has a potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour. IDEM, OAQ has agreed that the powder coating recovery system is an integral part of the powder coating booth and the potential to emit particulates (PM/PM10) was determined after the powder coating recovery system.

326 IAC 8-2 (Surface Coating Emission Limitations)

Pursuant to 326 IAC 8-2-1 (Applicability) and 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), this rule applies to facilities constructed after July 1, 1990 located in any county, and with actual VOC emissions of greater than fifteen (15) pounds per day before add-on controls. The

one (1) powder coating booth is not subject to the requirements of 326 IAC 8-2-9 because spray application of the dry powder coatings does not emit VOCs.

State Rule Applicability – Natural Gas Combustion Sources

326 IAC 4-2-2 (Incinerators)

The natural gas-fired oven is not an incinerator, as defined by 326 IAC 1-2-34, since they do not burn waste substances. Therefore, this oven is not subject to 326 IAC 4-2-2.

326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)

The natural gas-fired oven is not subject to 326 IAC 6-2 as this oven is not a source of indirect heating.

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

Pursuant to 326 IAC 6-3-1(b)(14), the natural gas-fired ovens are exempt from the requirements of 326 IAC 6-3, because it has a potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

326 IAC 7-1 (Sulfur dioxide emission limitations: applicability)

The natural gas-fired oven is not subject to the requirements of 326 IAC 7-1.1-1, because the potential and the actual emissions of sulfur dioxide are less than twenty-five (25) tons per year and ten (10) pounds per hour, respectively.

Conclusion

The operation of this steel bar grating manufacturing plant shall be subject to the conditions of the Exemption 033-24347-00099.

**Appendix A: Emission Calculations
Natural Gas Combustion Only
Oven Combustion (MM BTU/HR <100)**

Company Name: IKG Industries
 Address: 1801 Forrest Park Drive, Garrett, IN 46738
 Exemption: E033-24347-00099
 Reviewer: ERG/BL
 Date: March 20, 2006

Heat Input Capacity
MMBtu/hr
5.18

Potential Throughput
MMSCF/yr
44.4

	Pollutant					
	PM*	PM10*	SO2	NOx**	VOC	CO
Emission Factor (lb/MMSCF)	1.90	7.60	0.60	100	5.50	84.0
Potential to Emit (tons/yr)	0.04	0.17	0.01	2.22	0.12	1.87

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM combined.

**Emission factor for NOx (Uncontrolled) = 100 lb/MMSCF

Emission factors are from AP-42, Chapter 1.4, Natural Gas Combustion, Tables 1.4-1, 1.4-2, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (July 1998).

All emission factors are based on normal firing.

Methodology

Potential Throughput (MMSCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMSCF/1,020 MMBtu
 Potential to Emit (tons/yr) = Potential Throughput (MMSCF/yr) x Emission Factor (lb/MMSCF) x 1 ton/2,000 lbs

Appendix A: Emission Calculations
HAPs Emissions from Natural Gas Combustion
MM BTU/HR <100

Company Name: IKG Industries
Address: 1801 Forrest Park Drive, Garrett, IN 46738
Exemption: E033-24347-00099
Reviewer: ERG/BL
Date: March 20, 2006

HAPs - Organics

Emission Factor (lb/MMSCF)	Benzene 2.10E-03	Dichlorobenzene 1.20E-03	Formaldehyde 7.50E-02	Hexane 1.80E+00	Toluene 3.40E-03
Potential to Emit (tons/yr)	4.67E-05	2.67E-05	1.67E-03	4.00E-02	7.56E-05

HAPs - Metals

Emission Factor (lb/MMSCF)	Lead 5.00E-04	Cadmium 1.10E-03	Chromium 1.40E-03	Manganese 3.80E-04	Nickel 2.10E-03
Potential to Emit (tons/yr)	1.11E-05	2.44E-05	3.11E-05	8.44E-06	4.67E-05

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors provided above are from AP-42, Chapter 1.4, Table 1.4-2, 1.4-3 and 1.4-4 (July, 1998).
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emission Calculations
Electrostatic Coating Booth**

Company Name: IKG Industries
 Address: 1801 Forrest Park Drive, Garrett, IN 46738
 Exemption: E033-24347-00099
 Reviewer: ERG/BL
 Date: March 20, 2006

Material Name	Weight Percent Solids	Maximum Powder Throughput (lbs/hr)	Application Method	Transfer Efficiency	Removal Efficiency	PTE for PM * (lbs/hr)	PTE for PM * (tons/yr)	PTE for PM-10 * (lbs/hr)	PTE for PM-10 * (tons/yr)
Powder	100%	50.0	Electrostatic	53.8%	99.0%	0.23	1.01	0.23	1.01

The coating powder material does not contain VOC or HAPs.

The booth operates with a transfer efficiency of 59.8% for 80% of the time and of 29.9% for 20% of the time.

* IDEM, OAQ has evaluated the justifications and agreed that the fabric filter will be considered as an integral part of the electrostatic powder coat booth.

Methodology

PTE of PM (tons/yr) = Max. Powder Throughput (lbs/hr) x Weight Percent Solids x (1- Transfer Efficiency) x (1- Control Efficiency) x 8760 hrs/yr x 1 ton/2000 lbs

PTE of PM-10 (tons/yr) = Max. Powder Throughput (lbs/hr) x Weight Percent Solids x (1- Diameter less than 2.5 micron) x (1- Transfer Efficiency) x (1- Control Efficiency) x 8760 hrs/yr x 1 ton/2000 lbs

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

Company Name: IKG Industries
 Address: 1801 Forrest Park Drive, Garrett, IN 46738
 Exemption: E033-24347-00099
 Reviewer: ERG/BL
 Date: March 20, 2006

Process/emission unit	Potential To Emit (tons/year)							
	PM	PM-10	SO ₂	VOC	CO	NOx	Hexane	HAPs
Oven (Combustion)	0.04	0.17	0.01	0.12	1.87	2.22	0.04	0.04
Electrostatic Coating Booth	1.01	1.01	-	-	-	-	-	-
Total	1.05	1.18	0.01	0.12	1.87	2.22	0.04	0.04