



*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: September 22, 2006  
RE: TKO Graphics / 063-23230-00058  
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  
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Jason Scheurer  
TKO Graphix  
2751 Stafford Road, Suite A  
Plainfield, Indiana 46168

September 22, 2006

Re: Exempt Construction and Operation Status,  
063-23230-00058

Dear Mr. Scheurer:

The application from TKO Graphix, received on June 13, 2006, 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 stationary digital printing facility, located at 2751 Stafford Road, Indiana 46168, is classified as exempt from air pollution permit requirements:

- (a) One (1) digital printer (identified as EU-3360) used for printing signs, banners, and miscellaneous graphics, with a maximum material usage rate of 0.082 gallons per hour and exhausting at stack ID 3360. This unit was installed in 2004.
- (b) One (1) digital printer (identified as EU-150) used for printing signs, banners, and miscellaneous graphics, with a maximum material usage rate of 0.082 gallons per hour and exhausting at stack ID 150. This unit was installed in January 2006.
- (c) One (1) digital printer (identified as EU-SciTex) used for printing signs, banners, and miscellaneous graphics, with a maximum material usage rate of 0.15 gallons per hour and exhausting at stack ID 3360. This unit will be installed in 2006.
- (d) One (1) finishing area consisting of a clear coat process, with a combined maximum usage rate of 0.19 gallons per hour for the three digital printers.
- (e) Two (2) natural gas-fired space heaters with combined maximum heat input capacity of 0.57 MMBTU per hour.

The following conditions shall be applicable:

Pursuant to 326 IAC 5-1-2 (Opacity Limitations) and 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.

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 Sanober Durrani, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7810 to speak directly to Ms. Durrani. 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 and ask for Duane Van Laningham or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original signed by  
Nisha Sizemore, Chief  
Permits Branch  
Office of Air Quality

Attachments

ERG/SD

cc: File – Hendricks County  
Hendricks County Health Department  
Air Compliance Section Inspector – Vaughn Ison  
Permit Tracking  
Compliance Data Section

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

Technical Support Document (TSD) for an Exemption

**Source Background and Description**

|                  |   |
|------------------|---|
| Source Name:     | TKO Graphix                                   |
| Source Location: | 2751 Stafford Road, Plainfield, Indiana 46168 |
| County:          | Hendricks                                     |
| SIC Code:        | 2759  |
| Exemption No.:   | E063-23230-00058                              |
| Permit Reviewer: | ERG/SD  |

The Office of Air Quality (OAQ) has reviewed an application from TKO Graphix relating to the operation of a digital printing facility.

**Existing Emission Units and Pollution Control Equipment**

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

- (a) One (1) digital printer (identified as EU-3360) used for printing signs, banners, and miscellaneous graphics, with a maximum material usage rate of 0.082 gallons per hour and exhausting at stack ID 3360. This unit was installed in 2004.
- (b) One (1) digital printer (identified as EU-150) used for printing signs, banners, and miscellaneous graphics, with a maximum material usage rate of 0.082 gallons per hour and exhausting at stack ID 150. This unit was installed in January 2006.
- (c) One (1) finishing area consisting of a clear coat process, with a combined maximum usage rate of 0.19 gallons per hour for the three digital printers.
- (d) Two (2) natural gas-fired space heaters with combined maximum heat input capacity of 0.57 MMBTU per hour.

**New Emission Units**

One (1) digital printer (identified as EU-SciTex) used for printing signs, banners, and miscellaneous graphics, with a maximum material usage rate of 0.15 gallons per hour and exhausting at stack ID 3360. This unit will be installed in 2006.

**Existing Approvals**

There are no previous approvals issued to this source.

**Enforcement Issue**

There are no enforcement actions pending. The potential to emit of all criteria pollutants from the existing units are less than the levels listed in 326 IAC 2-1.1-3.

**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.

An application for the purposes of this review was received on June 13, 2006, with additional information received on August 25, 2006.

**Emission Calculations**

See Appendix A of this document for detailed emission calculations (pages 1 through 5).

**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/year) |
|-----------------|-------------------------------|
| PM              | 0.005                         |
| PM10            | 0.02                          |
| SO <sub>2</sub> | 1.46E-03                      |
| VOC             | 9.39                          |
| CO              | 0.20                          |
| NO <sub>x</sub> | 0.24                          |

| HAPs            | Potential to Emit (tons/year) |
|-----------------|-------------------------------|
| Benzene         | 5.11E-06                      |
| Dichlorobenzene | 2.92E-06                      |
| Formaldehyde    | 1.83E-04                      |
| Hexane          | 4.38E-03                      |
| Toluene         | 8.28E-06                      |
| Glycol Ether    | 7.38                          |
| Total           | 7.39                          |

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of each criteria pollutant are less than the levels listed in 326 IAC 2-1.1-3(d)(1). Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3. An exemption will be issued.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-1.1-1(16)) of a combination of HAPs is less than twenty-five (25) 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 Hendricks County.

| Pollutant       | Status        |
|-----------------|---------------|
| PM10            | Attainment    |
| PM 2.5          | Nonattainment |
| SO <sub>2</sub> | Attainment    |
| NO <sub>2</sub> | Attainment    |
| 8-hour Ozone    | Nonattainment |
| CO              | Attainment    |
| Lead            | Attainment    |

- (a) U.S.EPA in Federal Register Notice 70 FR 943 dated January 5, 2005 has designated Hendricks County as nonattainment for PM2.5. On March 7, 2005 the Indiana Attorney General's Office on behalf of IDEM filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of non-attainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for violation of the Clean Air Act, the OAQ is following the U.S. EPA's guidance to regulate PM10 emissions as surrogate for PM2.5 emissions pursuant to the Non-attainment New Source Review requirements. See the State Rule Applicability - Entire Source section.
- (b) 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 standards. Hendricks County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability - Entire Source Section.
- (c) Hendricks County has been classified as attainment or unclassifiable in Indiana for all other 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 – Entire Source section.
- (d) On August 7, 2006, a temporary emergency rule took effect revoking the one-hour ozone standard in Indiana. The Indiana Air Pollution Control Board has approved a permanent rule revision to incorporate these changes into 326 IAC 1-4-1. The permanent revision to 326 IAC 1-4-1 will take effect prior to the expiration of the emergency rule.

**Source Status**

Existing Source PSD, Part 70, or FESOP Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

| Pollutant        | Emissions (tons/year) |
|------------------|-----------------------|
| PM               | 0.005                 |
| PM10             | 0.02                  |
| SO <sub>2</sub>  | 1.46E-03              |
| VOC              | 9.39                  |
| CO               | 0.20                  |
| NO <sub>x</sub>  | 0.24                  |
| Single HAP       | <10                   |
| Combination HAPs | <25                   |

- (a) This existing source is not a major stationary source under 326 IAC 2-2 because no 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.
- (b) This existing source is not a major stationary source under 326 IAC 2-3 and 326 IAC 2-1.1-5 (Non-attainment New Source Review) because no nonattainment pollutant is emitted at a rate of 100 tons per year or greater.
- (c) These emissions were based on the potential to emit for the source as shown in Appendix A.

## Part 70 Permit Determination

### 326 IAC 2-7 (Part 70 Permit Program)

This existing 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) The requirements of 40 CFR 60, Subpart QQ - Standards of Performance for the Graphics Arts Industry: Publication Rotogravure Printing (326 IAC 12) are not included in this permit because rotogravure printing presses are not used at this source.

There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR 60) included in this exemption for this source.

- (b) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63, Subpart KK - National Emission Standards for the Printing and Publishing Industry (326 IAC 20-18) are not included in this permit because this source is not a major source of hazardous air pollutants (HAPs).
- (c) The requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63 Subpart JJJJ - National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating (326 IAC 20-65) are not included in this permit because this source is not a major source of HAPs.
- (d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) applicable to this source.

## State Rule Applicability – Entire Source

### 326 IAC 2-3 (Emission Offset) and 326 IAC 2-1.1-5 (Nonattainment New Source Review).

- (a) Hendricks County has been designated as non-attainment for PM<sub>2.5</sub> in 70 FR 943 dated January 5, 2005. According to the April 5, 2005 EPA memo titled "Implementation of New Source Review Requirements in PM<sub>2.5</sub> Nonattainment Areas" authored by Steve Page, Director of OAQPS, until EPA promulgates the PM<sub>2.5</sub> major NSR regulations, states should assume that a major stationary source's PM<sub>10</sub> emissions represent PM<sub>2.5</sub> emissions. IDEM will use the PM<sub>10</sub> nonattainment major NSR program as a surrogate to address the requirements of nonattainment major NSR for the PM<sub>2.5</sub> NAAQS. A major source in a nonattainment area is a source that emits or has the potential to emit 100 tpy of PM<sub>10</sub>. TKO Graphix has a potential to emit of PM<sub>10</sub> equal to 0.02 tons per year. Therefore, assuming that PM<sub>10</sub> emissions represent PM<sub>2.5</sub> emissions, the provisions of 326 IAC 2-1.1-5 (Nonattainment New Source Review) do not apply.
- (b) The potential VOC and NO<sub>x</sub> emissions are equal to 9.39 tons per year and 0.24 tons per year, respectively. The provisions of 326 IAC 2-3 do not apply.

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

TKO Graphix was constructed in 2004 and is not in one (1) of the twenty-eight (28) listed source categories. The potential to emit of each criteria pollutant from the entire source is less than 250 tons per year, including the installation of the new digital printer. Therefore, the provisions of 326 IAC 2-2 (PSD) do not apply.

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

The operation of this stationary digital printing source does not have a potential to emit of equal to or greater than ten (10) tons per year of a single HAP or equal to or greater than twenty-five (25) tons per year of a combination of HAPs. Therefore, the provisions of 326 IAC 2-4.1 do not apply.

**326 IAC 2-6 (Emission Reporting)**

This source is not subject to 326 IAC 2-6 (Emission Reporting) because it is not required to have an operating permit under 326 IAC 2-7, Part 70 Program; it is not located in Lake or Porter County and it does not emit lead at levels equal to or greater than five (5) tons per year.

**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.

**State Rule Applicability – Printing Operations**

**326 IAC 8-1-6 (New Facilities - General Reduction Requirement)**

Although constructed after January 1, 1980, the digital printing presses and finishing facility are not subject to the provisions of 326 IAC 8-1-6 because the potential VOC emissions from each facility are less than twenty five (25) tons per year.

**326 IAC 6-3-2 (Particulate Emission Limitations from Manufacturing Processes)**

The provisions of 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) are not applicable to the digital printing presses and finishing facility because these operations do not result in any particulate emissions.

**326 IAC 8-2-5 (Paper Coating Operations)**

Although this source involves saturation processes of paper, it is not subject to 326 IAC 8-2-5 (Paper Coating Operations) because potential VOC emissions are less than fifteen (15) pounds per day.

**326 IAC 8-5-5 (Graphic Arts Operations)**

The provisions of 326 IAC 8-2-5 (Graphic Arts Operations) are not applicable to the digital printing presses because this source does not have potential VOC emissions equal to or greater than twenty-five tons per year.

**State Rule Applicability – Natural Gas-Fired Space Heaters**

**326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)**

The natural gas-fired space heaters are not subject to the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because the particulate emissions from these units are less than 0.551 pounds per hour. Pursuant to 326 IAC 6-3-1(b)(14), manufacturing processes with potential emissions less than 0.551 pounds per hour are exempt from the 326 IAC 6-3-2 limitations.

**326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)**

The natural gas-fired space heaters are not subject to the provisions of 326 IAC 6-2-4 (Emission Limitations for Sources of Indirect Heating) because these units are not sources of indirect heating.

## **Conclusion**

The operation of this digital printing source shall be subject to the conditions of the Exemption No: 063-23230-00058.

**Appendix A: Emission Calculations  
Natural Gas-Fired Space Heaters**

**Company Name:** TKO Graphix  
**Address:** 2751 Stafford Road, Suite A, Plainfield, Indiana 46168  
**Exemption:** 063-23230  
**Plt ID:** 063-00008  
**Reviewer:** ERG/SD  
**Date:** September 20, 2006

**Heat Input Capacity**  
(MMBtu/hour)

0.57

**Potential Throughput**  
(MMSCF/year)

4.87

|                               | <b>Pollutant</b> |        |                 |                    |      |      |
|-------------------------------|------------------|--------|-----------------|--------------------|------|------|
|                               | * PM             | * PM10 | SO <sub>2</sub> | ** NO <sub>x</sub> | VOC  | CO   |
| Emission Factor (lb/MMSCF)    | 1.9              | 7.6    | 0.6             | 100                | 5.5  | 84   |
| Potential To Emit (tons/year) | 0.005            | 0.02   | 1.46E-03        | 0.24               | 0.01 | 0.20 |

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

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

All emission factors are based on normal firing.

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

**METHODOLOGY**

Potential Throughput (MMSCF/year) = Heat Input Capacity (MMBtu/hour) \* 8760 hours/year \* 1 MMSCF/1020 MMBtu

Potential To Emit (tons/year) = Potential Throughput (MMSCF/year) \* Emission Factor (lb/MMSCF) \* 1 ton/2000 lbs

See next page for HAPs emission calculations.

**Appendix A: Emission Calculations  
Natural Gas-Fired Space Heaters**

**Company Name:** TKO Graphix  
**Address:** 2751 Stafford Road, Suite A, Plainfield, Indiana 46168  
**Exemption:** 063-23230  
**Pit ID:** 063-00008  
**Reviewer:** ERG/SD  
**Date:** September 20, 2006

**HAPs - Organics**

|                               |                    |                            |                         |                   |                    |
|-------------------------------|--------------------|----------------------------|-------------------------|-------------------|--------------------|
| Emission Factor (lb/MMSCF)    | Benzene<br>2.1E-03 | Dichlorobenzene<br>1.2E-03 | Formaldehyde<br>7.5E-02 | Hexane<br>1.8E+00 | Toluene<br>3.4E-03 |
| Potential To Emit (tons/year) | 5.11E-06           | 2.92E-06                   | 1.83E-04                | 4.38E-03          | 8.28E-06           |

**HAPs - Metals**

|                               |                 |                    |                     |                      |                   |
|-------------------------------|-----------------|--------------------|---------------------|----------------------|-------------------|
| Emission Factor (lb/MMSCF)    | Lead<br>5.0E-04 | Cadmium<br>1.1E-03 | Chromium<br>1.4E-03 | Manganese<br>3.8E-04 | Nickel<br>2.1E-03 |
| Potential To Emit (tons/year) | 1.22E-06        | 2.68E-06           | 3.41E-06            | 9.25E-07             | 5.11E-06          |

Methodology is the same as previous page.

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

**Appendix A: Emissions Calculations  
VOC and Particulate Emissions  
Ink Usage**

**Company Name:** TKO Graphix

**Address:** 2751 Stafford Road, Suite A, Plainfield, Indiana 46168

**Exemption:** 063-23230

**Plt ID:** 063-00008

**Reviewer:** ERG/SD

**Date:** September 20, 2006

| Units ID          | VOC Content<br>(lbs/gal) | Max. Usage<br>(gal/unit) | Max. Throughput<br>(units/hour) | PTE of VOC<br>(lbs/hour) | PTE of VOC<br>(tons/year) | * HAP Content<br>(lbs/gal) | PTE of HAP<br>(lbs/hour) | PTE of HAP<br>(tons/year) |
|-------------------|--------------------------|--------------------------|---------------------------------|--------------------------|---------------------------|----------------------------|--------------------------|---------------------------|
| Digital Printer 1 | 6.83                     | 0.0357                   | 2.29                            | 0.56                     | 2.45                      | 5.37                       | 0.44                     | 1.92                      |
| Digital Printer 2 | 6.83                     | 0.0357                   | 2.29                            | 0.56                     | 2.45                      | 5.37                       | 0.44                     | 1.92                      |
| Digital Printer 3 | 6.83                     | 0.0357                   | 4.17                            | 1.02                     | 4.45                      | 5.37                       | 0.80                     | 3.50                      |
|                   |                          |                          |                                 |                          | <b>9.34</b>               |                            |                          | <b>7.35</b>               |

\* Gylcol Ether (CAS # 112-07-02)

**METHODOLOGY**

PTE of VOC/HAP (lbs/hour) = VOC/HAP Content (lbs/gal) \* Max. Usage (gal/unit) \* Max. Throughput (units/hour)

PTE of VOC/HAP (tons/year) = VOC/HAP Content (lb/gal) \* Max. Usage (gal/unit) \* Max. Throughput (units/hour) \* 8760 hours/year \* 1 ton/2000 lbs

**Appendix A: Emissions Calculations**  
**VOC and HAP Emissions**  
**Clear Coat Usage**

**Company Name:** TKO Graphix  
**Address:** 2751 Stafford Road, Suite A, Plainfield, Indiana 46168  
**Exemption:** 063-23230  
**Plt ID:** 063-00008  
**Reviewer:** ERG/SD  
**Date:** September 20, 2006

| Units ID          | VOC/HAP Content<br>(lbs/gal) | Max. Usage<br>(gal/unit) | Max. Throughput<br>(units/hour) | PTE of VOC/HAP<br>(lbs/hour) | PTE of VOC/HAP<br>(tons/year) |
|-------------------|------------------------------|--------------------------|---------------------------------|------------------------------|-------------------------------|
| Digital Printer 1 | 0.042                        | 0.0216                   | 2.29                            | 2.07E-03                     | 0.01                          |
| Digital Printer 2 | 0.042                        | 0.0216                   | 2.29                            | 2.07E-03                     | 0.01                          |
| Digital Printer 3 | 0.042                        | 0.0216                   | 4.17                            | 3.75E-03                     | 0.02                          |
|                   |                              |                          |                                 |                              | <b>0.03</b>                   |

\* Gylcol Ether (CAS # 112-07-02)

**METHODOLOGY**

PTE of VOC/HAP (lbs/hour) = VOC/HAP Content (lbs/gal) \* Max. Usage (gal/unit) \* Max. Throughput (units/hour)

PTE of VOC/HAP (tons/year) = VOC/HAP Content (lb/gal) \* Max. Usage (gal/unit) \* Max. Throughput (units/hour) \* 8760 hours/year \* 1 ton/2000 lbs

**Appendix A: Emission Calculations  
Summary**

**Company Name:** TKO Graphix  
**Address:** 2751 Stafford Road, Suite A, Plainfield, Indiana 46168  
**Exemption:** 063-23230  
**Plt ID:** 063-00008  
**Reviewer:** ERG/SD  
**Date:** September 20, 2006

**PTE FROM THE ENTIRE SOURCE**

| Emission/Process Units          | PM    | PM10 | SO <sub>2</sub> | NO <sub>x</sub> | VOC  | CO   | HAPs     |
|---------------------------------|-------|------|-----------------|-----------------|------|------|----------|
| Natural Gas-Fired Space Heaters | 0.005 | 0.02 | 1.46E-03        | 0.24            | 0.01 | 0.20 | 4.58E-03 |
| Ink Usage in 3 Digital Printers |       |      |                 |                 | 9.34 |      | 7.35     |
| Clear Coat Usage                |       |      |                 |                 | 0.03 |      | 0.03     |
| TOTAL                           | 0.005 | 0.02 | 1.46E-03        | 0.24            | 9.39 | 0.20 | 7.39     |