



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

TO: Interested Parties / Applicant

DATE: December 11, 2012

RE: Grafcor, Inc / 177-32331-00066

FROM: Matthew Stuckey, Branch 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, Suite N 501E, 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.dot12/03/07



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## NEW SOURCE REVIEW PERMIT AND SOURCE SPECIFIC OPERATING AGREEMENT OFFICE OF AIR QUALITY

**Grafcor, Inc.**  
**601 NW 5th St.**  
**Richmond, IN 47374**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this New Source Review (NSR) Permit and Source Specific Operating Agreement (SSOA).

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-5.1, 326 IAC 2-9 and 40 CFR 52.780, with conditions listed on the attached pages.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Source Specific Operating Agreement (SSOA) under 326 IAC 2-9.

Source Specific Operating Agreement No. S177-32331-00066	
Issued by:  Nathan Bell, Section Chief Permits Branch Office of Air Quality	Issuance Date: December 11, 2012

## 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 and A.2 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 pursuant to 326 IAC 2.

### A.1 General Information

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The Permittee owns and operates a stationary printing operation.

Source Address:	601 NW 5th St., Richmond, IN 47374
General Source Phone Number:	765-966-7030
SIC Code:	2752 (Commercial Printing, Lithographic)
County Location:	Wayne County
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Source Specific Operating Agreement (SSOA) Not 1 of 28 Source Categories

### A.2 Source Summary

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This stationary source consists of the following:

- (1) Surface Coating or Graphic Arts Operation [326 IAC 2-9-2.5]
- (2) External Combustion Sources [326 IAC 2-9-13]

### A.3 New Source Review and SSOA Applicability [326 IAC 2-9-1] [326 IAC 2-1.1-3(d)]

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- (a) This source, otherwise required to have a permit under 326 IAC 2-5.1, 326 IAC 2-5.5, 326 IAC 2-6.1, 326 IAC 2-7, or 326 IAC 2-8, has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for a Source Specific Operating Agreement (SSOA) under 326 IAC 2-9.
- (b) Pursuant to 326 IAC 2-9-1(g), the source may apply for up to four (4) different SSOAs contained in 326 IAC 2-9.
- (c) Pursuant to 326 IAC 2-1.1-3(d), this New Source Review Permit is required for the following:
  - (1) External combustion sources complying with 326 IAC 2-9-13

## SECTION B

## GENERAL CONDITIONS

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

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

### B.2 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4]

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This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 when prior to the start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as proposed.
- (b) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.
- (c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.

### B.3 Term of Conditions [326 IAC 2-1.1-9.5]

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Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

### B.4 Enforceability

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Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

### B.5 Severability

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The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

### B.6 Property Rights or Exclusive Privilege

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This permit does not convey any property rights of any sort or any exclusive privilege.

### B.7 Duty to Provide Information

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- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of

requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

**B.8 Prior Permits Superseded [326 IAC 2-1.1-9.5]**

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- (a) All terms and conditions of permits established prior to SSOA No. S177-32331-00066 and issued pursuant to permitting programs approved into the state implementation plan have been either:
- (1) incorporated as originally stated,
  - (2) revised, or
  - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

**B.9 Annual Notification [326 IAC 2-9-1(d)]**

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Pursuant to 326 IAC 2-9-1(d):

- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this SSOA.
- (b) The annual notice shall be submitted in the format attached no later than January 30 of each year to:
- Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, IN 46204-2251
- (c) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

**B.10 Source Modification Requirement [326 IAC 2-9-1(e)]**

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Pursuant to 326 IAC 2-9-1(e), before the Permittee modifies its operations in such a way that it will no longer comply with the applicable restrictions and conditions of this SSOA, it shall obtain the appropriate approval from IDEM, OAQ under 326 IAC 2-2, 326 IAC 2-3, 326 IAC 2-4.1, 326 IAC 2-5.1, 326 IAC 2-6.1, 326 IAC 2-7, and 326 IAC 2-8.

**B.11 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [IC 13-14-2-2] [IC 13-17-3-2] [IC 13-30-3-1]**

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Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.12 Permit Revocation [326 IAC 2-1.1-9] [326 IAC 2-9-1(j)]

- (a) Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:
  - (1) Violation of any conditions of this permit.
  - (2) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
  - (3) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
  - (4) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
  - (5) For any cause which establishes in the judgment of IDEM the fact that continuance of this permit is not consistent with purposes of this article.
- (b) Pursuant to 326 IAC 2-9-1(j), noncompliance with any applicable provision 326 IAC 2-9 or any requirement contained in this SSOA may result in the revocation of this SSOA and make this source subject to the applicable requirements of a major source.

## SECTION C

## SOURCE OPERATION CONDITIONS

Entire Source

### Emission Limitations and Standards [326 IAC 2-9]

#### C.1 Opacity [326 IAC 5-1]

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

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

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).

### Compliance Requirements [326 IAC 2-1.1-11] [326 IAC 2-9]

#### C.3 Compliance with Applicable Requirements [326 IAC 2-9-1(i)]

Pursuant to 326 IAC 2-9-1(i), the owner or operator is hereby notified that this operating agreement does not relieve the Permittee of the responsibility to comply with the provisions of any applicable federal, state, or local rules, or any New Source Performance Standards (NSPS), 40 CFR Part 60, or National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 61 or 40 CFR Part 63.

### Record Keeping and Reporting Requirements [326 IAC 2-9]

#### C.4 General Record Keeping Requirements [326 IAC 2-9-1(f)]

Pursuant to 326 IAC 2-9-1(f), records of all required monitoring data, reports and support information required by this SSOA shall be physically present or electronically accessible at the source location for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

#### C.5 Reporting Requirements [326 IAC 2-9-1(h)]

Pursuant to 326 IAC 2-9-1(h), any exceedance of any requirement contained in this operating agreement shall be reported, in writing, within one (1) week of its occurrence. Said report shall include information on the actions taken to correct the exceedance, including measures to reduce emissions, in order to comply with the established limits. If an exceedance is the result of a malfunction, then the provisions of 326 IAC 1-6 apply.

## SECTION D.1

## OPERATION CONDITIONS

Operation Description: Surface Coating or Graphic Arts Operation [326 IAC 2-9-2.5]

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

### Emission Limitations and Standards [326 IAC 2-9]

#### D.1.1 Volatile Organic Compounds and Hazardous Air Pollutants Limits [326 IAC 2-9-2.5(b)(2)(B)]

Pursuant to 326 IAC 2-9-2.5(b)(2)(B), the total amount of volatile organic compounds (VOC) and hazardous air pollutants (HAP), as supplied, delivered to the graphic arts operation shall not exceed the following:

- (a) the total amount of VOC shall not exceed two (2) tons per month,
- (b) the total amount of any single HAP shall not exceed eight hundred thirty-three (833) pounds per month, and
- (c) the total amount of any combination of HAP shall not exceed one (1) ton per month.

### Record Keeping and Reporting Requirements [326 IAC 2-9]

#### D.1.3 Record Keeping Requirements [326 IAC 2-9-2.5(b)(3)]

Pursuant to 326 IAC 2-9-2.5(b)(4), the source shall keep the following records of the graphic arts operation:

- (a) the number of gallons of each solvent containing material used,
- (b) the VOC and HAP content (pounds per gallon, as supplied) of each solvent containing material used,
- (c) material safety data sheets (MSDS) developed under 29 CFR 1910.1200(g) or a manufacturer data sheet containing the manufacturer's formulation data for each solvent containing material used.

If a range of VOC or HAP content is provided on either the MSDS or the manufacturer data sheet, the highest content reported shall be used.

If both the MSDS and manufacturer data sheet are available, the manufacturer data sheet shall be the primary source for determining the VOC or HAP content (pounds/gallon) of each solvent containing material,

- (d) a monthly summation of VOC and HAP usage, and
- (e) purchase orders and invoices for each solvent containing material used.

Section C - General Record Keeping Requirements of this SSOA contains the Permittee's obligations with regard to the records required by this condition.

#### D.1.4 Reporting Requirements [326 IAC 2-9-2.5(b)(6)]

Pursuant to 326 IAC 2-9-2.5(b)(6), the Permittee shall include with the annual notice required in Section B - Annual Notification, an inventory listing of the monthly volatile organic compound (VOC) and hazardous air pollutant (HAP) totals, and the total VOC and HAP emissions for the previous twelve (12) months.

## SECTION D.2

## OPERATION CONDITIONS

Operation Description: External Combustion Sources [326 IAC 2-9-13]

(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 2-9]

#### D.2.1 External Combustion Sources Limitation [326 IAC 2-9-13(b)(2)(B)]

Pursuant to 326 IAC 2-9-13(b)(2)(B), the fuel usage for the external combustion units at this source shall be limited to less than one thousand four hundred forty-two million cubic feet (1142 MMcf) of natural gas per twelve (12) consecutive month period.

#### D.2.2 Opacity [326 IAC 2-9-13(b)(1)]

Pursuant to 326 IAC 2-9-13(b)(1), the visible emissions from the source shall not exceed twenty percent (20%) opacity in twenty-four (24) consecutive readings in a six (6) minute period. The opacity shall be determined using 40 CFR 60, Appendix A, Method 9.

### Record Keeping and Reporting Requirements [326 IAC 2-9]

#### D.2.3 Record Keeping Requirements [326 IAC 2-9-13(e)]

Pursuant to 326 IAC 2-9-13(e), the source shall keep the following records for the external combustion units:

- (a) the monthly hours operated for each external combustion unit,
- (b) records of the annual fuel usage for each external combustion unit, and
- (c) records of all routine maintenance conducted on the external combustion units.

Section C - General Record Keeping Requirements of this SSOA contains the Permittee's obligations with regard to the records required by this condition.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH**

**SOURCE SPECIFIC OPERATING AGREEMENT (SSOA)  
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-9.

<b>Company Name:</b>	Grafcor, Inc.
<b>Address:</b>	601 5th St.
<b>City:</b>	Richmond, IN 47374
<b>Phone #:</b>	765-966-7030
<b>SSOA #:</b>	S177-32331-00066

I hereby certify that Grafcor, Inc. is:

still in operation.

no longer in operation.

I hereby certify that Grafcor, Inc. is:

in compliance with the requirements  
of SSOA S177-32331-00066.

not in compliance with the requirements  
of SSOA S177-32331-00066.

<b>Authorized Individual (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

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

<b>Noncompliance:</b>



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

Addendum to the Technical Support Document (ATSD) for a  
Source Specific Operating Agreement (SSOA)

**Source Background and Description**

<b>Source Name:</b>	<b>Grafcor, Inc.</b>
<b>Source Location:</b>	<b>601 NW 5th St., Richmond, IN 47374</b>
<b>County:</b>	<b>Wayne</b>
<b>SIC Code:</b>	<b>2752 (Commercial Printing, Lithographic)</b>
<b>Operation Permit No.:</b>	<b>S177-32331-00066</b>
<b>Permit Reviewer:</b>	<b>Brian Wright</b>

On November 5, 2012, the Office of Air Quality (OAQ) had a notice published in the Palladium Item, Richmond, Indiana, stating that Grafcor, Inc. had applied for a transition from a MSOP to a SSOA for their stationary printing operation, because a change in the coatings used at the operation resulted in a higher potential to emit. The notice also stated that the OAQ proposed to issue a SSOA for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

**Comments and Responses**

On October 18, 2012, Grafcor, Inc. submitted comments to IDEM, OAQ on the draft SSOA during the applicant review period. Since additional information was needed to resolve these comments, IDEM decided to address these comments during the public notice period in order to allow the application process to progress.

The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD, but the Permit will have the updated changes. The comments and revised permit language are provided below with deleted language as ~~strikeouts~~ and new language **bolded**.

**Comment 1:**

The applicant is concerned about the requirements of the SSOA for fuel combustion units to record hours of operations. Grafcor, Inc.'s comments are as follows:

1. For the hours of operation on the fuel combustion units, if the permit condition cannot be changed, there needs to be a note added to the permit that states what you have in the email that the bill records (which give gas usage) will satisfy this requirement. Otherwise, how would an inspector know that the hours of operation do not need to be tracked and keeping billing records is acceptable? If there is not a note added to the permit, the facility could very easily be cited for not meeting a very specific requirement, which as we stated is impossible to meet.

The other option is to deem these units exempt from permitting and drop them from the permit, which is the more preferable approach as those who prepared the SSOA for fuel combustion units could have indented companies to install hour use meters on hot water heaters and other small roof top heating units.

### Response to Comment 1:

The requirements contained in Section D.2 of the SSOA reflect the SSOA rule requirements contained in Indiana Administrative Code 326 IAC 2-9-13(e) (Source Specific Operating Agreement Program: External combustion sources) and therefore cannot be changed or removed. In addition, IDEM OAQ has determined that the fuel combustion units should not be removed from the permit. The applicant should contact the Compliance and Enforcement Branch inspector assigned to the Grafcor facility to help determine how compliance may be achieved. No changes were made to the SSOA as a result of this comment.

### Comment 2:

1. Please revise the emission calculations as follows:
  - a. Since printing presses can either print or be cleaned and cannot do both simultaneously and the maximum production time is 65% and downtime is 35%, the 8760 hours for estimating emissions from printing (e.g., ink, fountain solution, and coating) needs to be reduced to 5,694 hours and the cleaning solvents and misc. need to be reduced to 3,066 hours. For the cleaning aspect, it was assumed that cleaning solvent use occurred during the entire time, but actual experience is that cleaning is only a fraction of this time. This approach is supported by EPA in the TSD for Title V Permitting of Printing Operations and was referenced in the calculations supplied with the permit application.
  - b. For the coating emissions, do use the coating retarder to represent the coating emissions as this is an additive and not an actual coating. The varnish has the highest VOC content.
  - c. For the fountain solution, do not use isopropyl alcohol to represent fountain solution as this is not a fountain solution, but an additive. The 2451 Fountain Concentrate is the fountain solution that is currently being used. The fountain solution and additives are mixed at ratios of 3-5 ounces per gallon of water so the amount actually emitted is much lower.
  - d. For the cleaning solutions, do not use the MRC as the representative cleaning solvent as this solvent cannot be used on all parts of the press, only one part, which is a metal cylinder. It is better to use the Autowash 6000 as this is the most common solvent used. In addition, all cleaning solvents with vapor pressures less than 10 mm Hg are to have a 50% emission factor applied to the emissions and the Autowash 6000 does have a vapor pressure less than 10 mm Hg. This approach is supported by EPA in the TSD for Title V Permitting of Printing Operations and was referenced in the calculations supplied with the permit application.
  - e. For the HAP emissions, you need to use the same input materials as for the VOC calculations to be consistent. For example, the Blanket Wash N is not currently being used, but had to be identified in the actual emission calculations.

### Response to Comment 2:

The IDEM responses to the above items are as follows:

- a. IDEM reviewed the EPA document cited by Grafcor and found the following quote in regards 65%/35% breakdown of PTE.

“The maximum hours of operation, unless limited by permit, should be based on round-the-clock press operation (8,760 hours/year), less time required for makeready/setup as determined by a documented, conservative review of historical data for the facility.”

IDEM requested that the applicant document of the typical production cycle for Grafcor, Inc. in order for this request to be considered. Grafcor, Inc. never provided the information so this change in PTE was not made.

- b. IDEM requested that Grafcor, Inc. supply the concentration of coating and coating retarder mixture as applied in order to make this change. This is consistent with how IDEM has handled other requests for potential emissions to be calculated as applied. Grafcor, Inc. did not supply this information so the change was not made.
- c. IDEM requested that Grafcor, Inc. supply the concentration of fountain solution mixture as applied in order to make this change. This is consistent with how IDEM has handled other requests for potential emissions to be calculated as applied. Grafcor, Inc. supplied the concentrations for each printer so potential emissions for the fountain solutions has been changed (see Appendix A of this ATSD for updated calculations).
- d. After review of the EPA document referenced, IDEM has determined that the 50% emission factor is valid for blanket washes with a vapor pressure of less than 10 mm Hg so long as the rags used to apply the solvent are stored in a sealed container. The 50% emission factor was applied to solvents that meet this criteria (see Appendix A of this ATSD for updated calculations).
- e. IDEM determines worst case coating individually for each pollutant. This approach is consistent with how IDEM has calculated potential emission for other permits. No change to emission calculations were made in response to this comment.

The revised unlimited PTE based on these comments is listed in the following table, with the old values as ~~strikeouts~~ and updated values **bolded**:

Unrestricted Potential Emissions	
Pollutant	Tons/year
PM	0.02
PM10 <sup>(1)</sup>	0.07
PM <sub>2.5</sub>	0.07
SO <sub>2</sub>	0.01
VOC	<b>428.60</b> <del>455.62</del>
CO	0.74
NO <sub>x</sub>	0.88
GHGs as CO <sub>2</sub> e	1058
Single HAP	51.90 Toluene
Total HAP	85.65

<b>IDEM Contact</b>
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- (a) Questions regarding this proposed SSOA can be directed to Brian Wright at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate

Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-6544 or toll free at 1-800-451-6027 extension 4-6544.

- (b) A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.idem.in.gov](http://www.idem.in.gov)

**Appendix A: Emission Calculations  
Emission Summary**

**Company Name:** Grafcor, Inc.  
**Source Address:** 601 NW 5th St., Richmond, IN 47374  
**SSOA No.:** S177-32331-00066  
**Reviewer:** Brian Wright

**Unlimited Potential to Emit (tons/yr)**

Emission Units	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NOx	VOC	CO	GHGs as CO <sub>2</sub> e	TOTAL HAPs	Worst Single HAP
Planeta 364	0.00	0.00	0.00	0.00	0.00	178.10	0.00	0.00	24.78	10.77 Toluene
Harris 477	0.00	0.00	0.00	0.00	0.00	124.99	0.00	0.00	17.45	7.59 Toluene
Press 380	0.00	0.00	0.00	0.00	0.00	125.46	0.00	0.00	17.45	7.59 Toluene
Natural Gas	0.02	0.07	0.07	0.01	0.88	0.05	0.74	1058	0.02	0.00 Toluene
<b>Total</b>	<b>0.02</b>	<b>0.07</b>	<b>0.07</b>	<b>0.01</b>	<b>0.88</b>	<b>428.60</b>	<b>0.74</b>	<b>1058</b>	<b>59.70</b>	<b>25.95</b> Toluene

**Limited Potential to Emit (tons/yr)**

Emission Units	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NOx	VOC	CO	GHGs as CO <sub>2</sub> e	TOTAL HAPs	Worst Single HAP
Printing Presses*	0.00	0.00	0.00	0.00	0.00	24.00	0.00	0.00	12.00	4.98 Toluene
Natural Gas**	1.08	4.34	4.34	0.34	57.10	3.14	47.96	68937	1.08	0.00 Toluene
<b>Total</b>	<b>1.08</b>	<b>4.34</b>	<b>4.34</b>	<b>0.34</b>	<b>57.10</b>	<b>27.14</b>	<b>47.96</b>	<b>68937</b>	<b>13.08</b>	<b>4.98</b> Toluene

\*Pursuant to 326 IAC 2-9-2.5(b)(5), total VOC emissions from the 3 lithographic printers shall not exceed two (2) tons per month.

Total emissions from HAPs shall not exceed eight hundred thirty-three (833) pounds per month of any single HAP and one (1) tons per month of total HAP.

\*\*Pursuant to 326 IAC 2-9-13(b)(2)(B), the fuel usage for the external combustion units at this source shall be limited to less than one thousand four hundred forty-two million cubic feet (1142 MMcf) of natural gas per twelve (12) consecutive month period.

**Appendix A: Emissions Calculations  
VOC From Printing Press Operations**

**Company Name: Grafcor, Inc.**  
**Source Address: 601 NW 5th St., Richmond, IN 47374**  
**SSOA No.: S177-32331-00066**  
**Reviewer: Brian Wright**

THROUGHPUT			
Press I.D.	MAXIMUM LINE SPEED (FEET/MIN)	MAXIMUM PRINT WIDTH (INCHES)	MMin <sup>2</sup> /YEAR
KBA 301922 - 64 inch	427	64	172363

INK VOCS					
Ink Name	Maxium Coverage (lbs/MMin <sup>2</sup> )	Weight % Volatiles*	Flash Off %	Throughput (MMin <sup>2</sup> /Year)	Emissions (tons/yr)
<b>Ink</b>					
WR Process Wax and Color Wax	3.4	1%	5.00%	172363	0.15
INXPro Process Black	3.4	20%	5.00%	172363	2.93
<b>INXPro Process Cyan</b>	<b>3.4</b>	<b>29%</b>	<b>5.00%</b>	<b>172363</b>	<b>4.28</b>
INXPro Process Magenta	3.4	23%	5.00%	172363	3.37
INX Pro Process Yellow	3.4	25%	5.00%	172363	3.66
PMS and Other Inks	3.4	17%	5.00%	172363	2.49
<b>Coating</b>					
Varnish	3	40%	5.00%	172363	5.15
Prisco Q8000	3	29%	100.00%	172363	74.98
Prisco Q5512B0	3	5%	100.00%	172363	12.93
Prisco Coating Retarder	3	50%	100.00%	172363	<b>129.27</b>
Nova AQ-641 General Purpose	3	3%	100.00%	172363	7.76
Nova AQ-650 Satin Aqua Coat	3	2%	100.00%	172363	5.17
Nova AQ-661 Dull Aqua Coat	3	3%	100.00%	172363	7.76
Nova AQ-670 Non Skid Aqua Coat	3	5%	100.00%	172363	12.93
<b>Fountain Solution</b>					
Preparation N Plus	0.14	54%	100.00%	172363	6.56
2451 Fountain Concentrate	0.14	19%	100.00%	172363	2.30
Alkaless P	0.14	61%	100.00%	172363	7.34
Alkaless R	0.14	99%	100.00%	172363	11.94
Alkaless 3000	0.14	81%	100.00%	172363	9.77
Isopropyl alcohol	0.14	100%	100.00%	172363	12.07
3451 U Fountain Concentrate	0.14	24%	100.00%	172363	2.90
Nova 501 Fountain Solution	0.14	21%	100.00%	172363	2.53
Nova 902 Alcohol Substitute	0.14	77%	100.00%	172363	9.29
Fountain Solution (as applied)	0.14	8.61%	100%	172363	<b>1.04</b>
<b>Cleaning Solvents</b>					
Prisco Prepack (17.6 x 65.38)	0.5	1%	100.00%	172363	0.43
Prisco Prepack (12 x 77.75)	0.5	1%	100.00%	172363	0.43
Autowash 6000	0.5	98%	5.00%	172363	2.11
MRC-F	0.5	100%	100.00%	172363	<b>43.09</b>
Quick Wash	0.5	100%	50.00%	172363	21.55
Aqueous Coating Cleaner	0.5	5%	100.00%	172363	2.15
Velocity Plate Cleaner	0.5	59%	100.00%	172363	25.42
EEZY Klene (16 oz)	0.5	94%	100.00%	172363	40.51
Blanket Wash N	0.5	100%	50.00%	172363	21.55
Royal Flush	0.5	16%	100.00%	172363	6.89
135 BLKT Blanket Wash	0.5	100%	50.00%	172363	21.55
362 ROL Power Wash	0.5	100%	5.00%	172363	2.15
RBP Digi Plate Cleaner	0.5	9%	100.00%	172363	3.88
<b>Miscellaneous</b>					
Super Inkosaver Aero Can (13 oz)	0.005	68%	100.00%	172363	0.29
FSC - Prisco Gum Arabic	0.005	1%	100.00%	172363	0.00
D-Stat Anti Static Spray (12.5 oz)	0.005	97%	100.00%	172363	<b>0.42</b>
Silicon Spray (11 oz)	0.005	89%	100.00%	172363	0.38
Force 40 Spray Cleaner (32 oz)	0.005	4%	100.00%	172363	0.02
Scratch Remover (32 oz)	0.005	13%	100.00%	172363	0.06
CyberLube (16 oz)	0.005	95%	100.00%	172363	0.41
PL/RCL Aerosol Can (16 oz)	0.005	50%	100.00%	172363	0.22
No Skin (ink anti skinning cmpd)	0.005	25%	100.00%	172363	0.11
Tropaste (roller cleaning cmpd) 2.2 lb	0.005	0%	100.00%	172363	0.00

<b>Total VOC Emissions =</b>	<b>178.10 Ton/yr</b>
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\*VOC (Tons/Year) = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight % volatiles (weight % of water & organics - weight % of water = weight % organics) \* Flash off \* Throughput \* 1 Ton per 2000 pounds

**METHODOLOGY**

Throughput = Maxium line speed feet per minute \* Convert feet to inches \* Maximum print width inches \* 60 minutes per hour \* 8760 hours per year = MMin<sup>2</sup> per Year  
VOC = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight percentage volatiles (water minus organics) \* Flash off \* Throughput \* Tons per 2000 pounds = Tons per Year  
NOTE: HEAT SET OFFSET PRINTING HAS AN ASSUMED FLASH OFF OF 80%. OTHER TYPES OF PRINTERS HAVE A FLASH OFF OF 100%.  
(Source -OAQPS Draft Guidance, "Control of Volatile Organic Compound Emissions from Offset Lithographic Printing (9/93) )

**Appendix A: Emissions Calculations  
VOC From Printing Press Operations**

**Company Name: Grafcor, Inc.**  
**Source Address: 601 NW 5th St., Richmond, IN 47374**  
**SSOA No.: S177-32331-00066**  
**Reviewer: Brian Wright**

THROUGHPUT			
Press I.D.	MAXIMUM LINE SPEED (FEET/MIN)	MAXIMUM PRINT WIDTH (INCHES)	MMin <sup>2</sup> /YEAR
Harris 477	250	77	121414

INK VOCS					
Ink Name	Maxium Coverage (lbs/MMin <sup>2</sup> )	Weight % Volatiles*	Flash Off %	Throughput (MMin <sup>2</sup> /Year)	Emissions (tons/yr)
<b>Ink</b>					
WR Process Wax and Color Wax	3.4	1%	5.00%	121414	0.10
INXPro Process Black	3.4	20%	5.00%	121414	2.06
<b>INXPro Process Cyan</b>	<b>3.4</b>	<b>29%</b>	<b>5.00%</b>	<b>121414</b>	<b>3.02</b>
INXPro Process Magenta	3.4	23%	5.00%	121414	2.37
INX Pro Process Yellow	3.4	25%	5.00%	121414	2.58
PMS and Other Inks	3.4	17%	5.00%	121414	1.75
<b>Coating</b>					
Varnish	3	40%	5.00%	121414	3.63
Prisco Q8000	3	29%	100.00%	121414	52.81
Prisco Q5512B0	3	5%	100.00%	121414	9.11
Prisco Coating Retarder	3	50%	100.00%	121414	<b>91.06</b>
Nova AQ-641 General Purpose	3	3%	100.00%	121414	5.46
Nova AQ-650 Satin Aqua Coat	3	2%	100.00%	121414	3.64
Nova AQ-661 Dull Aqua Coat	3	3%	100.00%	121414	5.46
Nova AQ-670 Non Skid Aqua Coat	3	5%	100.00%	121414	9.11
<b>Fountain Solution</b>					
Preparation N Plus	0.14	54%	100.00%	121414	4.62
2451 Fountain Concentrate	0.14	19%	100.00%	121414	1.62
Alkaless P	0.14	61%	100.00%	121414	5.17
Alkaless R	0.14	99%	100.00%	121414	8.41
Alkaless 3000	0.14	81%	100.00%	121414	6.88
Isopropyl alcohol	0.14	100%	100.00%	121414	8.50
3451 U Fountain Concentrate	0.14	24%	100.00%	121414	2.04
Nova 501 Fountain Solution	0.14	21%	100.00%	121414	1.78
Nova 902 Alcohol Substitute	0.14	77%	100.00%	121414	6.54
Fountain Solution (as applied)	0.14	3.16%	100%	121414	<b>0.27</b>
<b>Cleaning Solvents</b>					
Prisco Prepack (17.6 x 65.38)	0.5	1%	100.00%	121414	0.30
Prisco Prepack (12 x 77.75)	0.5	1%	100.00%	121414	0.30
Autowash 6000	0.5	98%	5.00%	121414	1.49
MRC-F	0.5	100%	100.00%	121414	<b>30.35</b>
Quick Wash	0.5	100%	50.00%	121414	15.18
Aqueous Coating Cleaner	0.5	5%	100.00%	121414	1.52
Velocity Plate Cleaner	0.5	59%	100.00%	121414	17.91
EEZY Klene (16 oz)	0.5	94%	100.00%	121414	28.53
Blanket Wash N	0.5	100%	50.00%	121414	15.18
Royal Flush	0.5	16%	100.00%	121414	4.86
135 BLKT Blanket Wash	0.5	100%	50.00%	121414	15.18
362 ROL Power Wash	0.5	100%	5.00%	121414	1.52
RBP Digi Plate Cleaner	0.5	9%	100.00%	121414	2.73
<b>Miscellaneous</b>					
Super Inkosaver Aero Can (13 oz)	0.005	68%	100.00%	121414	0.21
FSC - Prisco Gum Arabic	0.005	1%	100.00%	121414	0.00
D-Stat Anti Static Spray (12.5 oz)	0.005	97%	100.00%	121414	<b>0.29</b>
Silicon Spray (11 oz)	0.005	89%	100.00%	121414	0.27
Force 40 Spray Cleaner (32 oz)	0.005	4%	100.00%	121414	0.01
Scratch Remover (32 oz)	0.005	13%	100.00%	121414	0.04
CyberLube (16 oz)	0.005	95%	100.00%	121414	0.29
PL/RCL Aerosol Can (16 oz)	0.005	50%	100.00%	121414	0.15
No Skin (ink anti skinning cmpd)	0.005	25%	100.00%	121414	0.08
Tropaste (roller cleaning cmpd) 2.2 lb	0.005	0%	100.00%	121414	0.00

<b>Total VOC Emissions =</b>	<b>124.99 Ton/yr</b>
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\*VOC (Tons/Year) = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight % volatiles (weight % of water & organics - weight % of water = weight % organics) \* Flash off \* Throughput \* 1 Ton per 2000 pounds

**METHODOLOGY**

Throughput = Maxium line speed feet per minute \* Convert feet to inches \* Maximum print width inches \* 60 minutes per hour \* 8760 hours per year = MMin<sup>2</sup> per Year  
VOC = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight percentage volatiles (water minus organics) \* Flash off \* Throughput \* Tons per 2000 pounds = Tons per Year  
NOTE: HEAT SET OFFSET PRINTING HAS AN ASSUMED FLASH OFF OF 80%. OTHER TYPES OF PRINTERS HAVE A FLASH OFF OF 100%.  
(Source -OAQPS Draft Guidance, "Control of Volatile Organic Compound Emissions from Offset Lithographic Printing (9/93) )

**Appendix A: Emissions Calculations  
VOC From Printing Press Operations**

**Company Name: Grafcor, Inc.**  
**Source Address: 601 NW 5th St., Richmond, IN 47374**  
**SSOA No.: S177-32331-00066**  
**Reviewer: Brian Wright**

THROUGHPUT			
Press I.D.	MAXIMUM LINE SPEED (FEET/MIN)	MAXIMUM PRINT WIDTH (INCHES)	MMin <sup>2</sup> /YEAR
Press 380	250	77	121414

INK VOCS					
Ink Name	Maxium Coverage (lbs/MMin <sup>2</sup> )	Weight % Volatiles*	Flash Off %	Throughput (MMin <sup>2</sup> /Year)	Emissions (tons/yr)
<b>Ink</b>					
WR Process Wax and Color Wax	3.4	1%	5.00%	121414	0.10
INXPro Process Black	3.4	20%	5.00%	121414	2.06
<b>INXPro Process Cyan</b>	<b>3.4</b>	<b>29%</b>	<b>5.00%</b>	<b>121414</b>	<b>3.02</b>
INXPro Process Magenta	3.4	23%	5.00%	121414	2.37
INX Pro Process Yellow	3.4	25%	5.00%	121414	2.58
PMS and Other Inks	3.4	17%	5.00%	121414	1.75
<b>Coating</b>					
Varnish	3	40%	5.00%	121414	3.63
Prisco Q8000	3	29%	100.00%	121414	52.81
Prisco Q5512B0	3	5%	100.00%	121414	9.11
Prisco Coating Retarder	3	50%	100.00%	121414	<b>91.06</b>
Nova AQ-641 General Purpose	3	3%	100.00%	121414	5.46
Nova AQ-650 Satin Aqua Coat	3	2%	100.00%	121414	3.64
Nova AQ-661 Dull Aqua Coat	3	3%	100.00%	121414	5.46
Nova AQ-670 Non Skid Aqua Coat	3	5%	100.00%	121414	9.11
<b>Fountain Solution</b>					
Preparation N Plus	0.14	54%	100.00%	121414	4.62
2451 Fountain Concentrate	0.14	19%	100.00%	121414	1.62
Alkaless P	0.14	61%	100.00%	121414	5.17
Alkaless R	0.14	99%	100.00%	121414	8.41
Alkaless 3000	0.14	81%	100.00%	121414	6.88
Isopropyl alcohol	0.14	100%	100.00%	121414	8.50
3451 U Fountain Concentrate	0.14	24%	100.00%	121414	2.04
Nova 501 Fountain Solution	0.14	21%	100.00%	121414	1.78
Nova 902 Alcohol Substitute	0.14	77%	100.00%	121414	6.54
Fountain Solution (as applied)	0.14	8.61%	100%	121414	<b>0.73</b>
<b>Cleaning Solvents</b>					
Prisco Prepack (17.6 x 65.38)	0.5	1%	100.00%	121414	0.30
Prisco Prepack (12 x 77.75)	0.5	1%	100.00%	121414	0.30
Autowash 6000	0.5	98%	5.00%	121414	1.49
MRC-F	0.5	100%	100.00%	121414	<b>30.35</b>
Quick Wash	0.5	100%	50.00%	121414	15.18
Aqueous Coating Cleaner	0.5	5%	100.00%	121414	1.52
Velocity Plate Cleaner	0.5	59%	100.00%	121414	17.91
EEZY Klene (16 oz)	0.5	94%	100.00%	121414	28.53
Blanket Wash N	0.5	100%	50.00%	121414	15.18
Royal Flush	0.5	16%	100.00%	121414	4.86
135 BLKT Blanket Wash	0.5	100%	50.00%	121414	15.18
362 ROL Power Wash	0.5	100%	5.00%	121414	1.52
RBP Digi Plate Cleaner	0.5	9%	100.00%	121414	2.73
<b>Miscellaneous</b>					
Super Inkosaver Aero Can (13 oz)	0.005	68%	100.00%	121414	0.21
FSC - Prisco Gum Arabic	0.005	1%	100.00%	121414	0.00
D-Stat Anti Static Spray (12.5 oz)	0.005	97%	100.00%	121414	<b>0.29</b>
Silicon Spray (11 oz)	0.005	89%	100.00%	121414	0.27
Force 40 Spray Cleaner (32 oz)	0.005	4%	100.00%	121414	0.01
Scratch Remover (32 oz)	0.005	13%	100.00%	121414	0.04
CyberLube (16 oz)	0.005	95%	100.00%	121414	0.29
PL/RCL Aerosol Can (16 oz)	0.005	50%	100.00%	121414	0.15
No Skin (ink anti skinning cmpd)	0.005	25%	100.00%	121414	0.08
Tropaste (roller cleaning cmpd) 2.2 lb	0.005	0%	100.00%	121414	0.00

<b>Total VOC Emissions =</b>	<b>125.46 Ton/yr</b>
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\*VOC (Tons/Year) = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight % volatiles (weight % of water & organics - weight % of water = weight % organics) \* Flash off \* Throughput \* 1 Ton per 2000 pounds

**METHODOLOGY**

Throughput = Maxium line speed feet per minute \* Convert feet to inches \* Maximum print width inches \* 60 minutes per hour \* 8760 hours per year = MMin<sup>2</sup> per Year  
VOC = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight percentage volatiles (water minus organics) \* Flash off \* Throughput \* Tons per 2000 pounds = Tons per Year  
NOTE: HEAT SET OFFSET PRINTING HAS AN ASSUMED FLASH OFF OF 80%. OTHER TYPES OF PRINTERS HAVE A FLASH OFF OF 100%.  
(Source -OAQPS Draft Guidance, "Control of Volatile Organic Compound Emissions from Offset Lithographic Printing (9/93) )

Appendix A: Emissions Calculations  
VOC From Printing Press Operations

ATSD Appendix A: Page 5 of 13

Company Name: Grafcor, Inc.  
Source Address: 601 NW 5th St, Richmond, IN 47374  
SSOA No.: S177-32331-00066  
Reviewer: Brian Wright

THROUGHPUT			
Press I.D.	MAXIMUM LINE SPEED (FEET/MIN)	MAXIMUM PRINT WIDTH (INCHES)	MMin <sup>2</sup> /YEAR
KBA 301922 - 64 inch	427	64	172363

INK VOCS																
Ink Name	Maximum Coverage	Weight % Diethanolamine	Weight % Ethylene Glycol	Weight % Xylene	Weight % Cumene	Weight % Toluene	Weight % Hexane	Flash Off %	Throughput (MMin <sup>2</sup> /Year)	Diethanolamine (tons/yr)	Ethylene Glycol (tons/yr)	Xylene (tons/yr)	Cumene (tons/yr)	Toluene (tons/yr)	Benzene (tons/yr)	Total HAP (tons/yr)
<b>Ink</b>																
WR Process Wax and Color Wax	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INXPro Process Black	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INXPro Process Cyan	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INXPro Process Magenta	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INX Pro Process Yellow	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PMS and Other Inks	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Coating</b>																
Varnish	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco Q8000	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco Q5512B0	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco Coating Retarder	3	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	6.46	0.00	0.00	0.00	0.00	0.00	6.46
Nova AQ-641 General Purpose	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova AQ-650 Satin Aqua Coat	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova AQ-661 Dull Aqua Coat	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova AQ-670 Non Skid Aqua Coat	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fountain Solution</b>																
Preparation N Plus	0.14	0.0%	60.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	7.24	0.00	0.00	0.00	0.00	7.24
2451 Fountain Concentrate	0.14	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	1.21	0.00	0.00	0.00	0.00	1.21
Alkaless P	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkaless R	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkaless 3000	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Isopropyl alcohol	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3451 U Fountain Concentrate	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova 501 Fountain Solution	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova 902 Alcohol Substitute	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fountain Solution (as applied)	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Cleaning Solvents</b>																
Prisco Prepack (17.6 x 65.38)	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco Prepack (12 x 77.75)	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Autowash 6000	0.5	0.0%	0.0%	1.5%	1.2%	0.0%	0.0%	5.00%	172363	0.00	0.00	0.03	0.03	0.00	0.00	0.06
MRC-F	0.5	0.0%	0.0%	30.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	12.93	0.00	0.00	0.00	12.93
Quick Wash	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aqueous Coating Cleaner	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Velocity Plate Cleaner	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EEZY Klean (16 oz)	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blanket Wash N	0.5	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	50.00%	172363	0.00	0.00	0.00	0.00	10.77	0.00	10.77
Royal Flush	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135 BLKT Blanket Wash	0.5	0.0%	0.0%	2.5%	0.0%	2.5%	0.0%	50.00%	172363	0.00	0.00	0.54	0.00	0.54	0.00	1.08
362 ROL Power Wash	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RBP Digi Plate Cleaner	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Miscellaneous</b>																
Super Inkosaver Aero Can (13 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FSC - Prisco Gum Arabic	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D-Stat Anti Static Spray (12.5 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	30.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.13	0.13
Silicon Spray (11 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	70.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.30	0.30
Force 40 Spray Cleaner (32 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scratch Remover (32 oz)	0.005	0.0%	0.0%	2.5%	2.5%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.01	0.01	0.00	0.00	0.02
CyberLube (16 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PL/RCL Aerosol Can (16 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
No Skin (ink anti skinning cmpd)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tropaste (roller cleaning cmpd) 2.2 lb	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total(tons/yr)</b>										<b>6.46</b>	<b>7.24</b>	<b>12.94</b>	<b>0.04</b>	<b>10.77</b>	<b>0.30</b>	<b>24.78</b>

Worst Case Emissions used for each chemical type  
HAP (Tons/Year) = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight % HAP \* Flash off \* Throughput \* 1 Ton per 2000 pounds

METHODOLOGY

Throughput = Maximum line speed feet per minute \* Convert feet to inches \* Maximum print width inches \* 60 minutes per hour \* 8760 hours per year = MMin<sup>2</sup> per Year  
HAP = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight percentage HAP \* Flash off \* Throughput \* Tons per 2000 pounds = Tons per Year  
NOTE: HEAT SET OFFSET PRINTING HAS AN ASSUMED FLASH OFF OF 80%. OTHER TYPES OF PRINTERS HAVE A FLASH OFF of printing.xls 9/95

Appendix A: Emissions Calculations  
VOC From Printing Press Operations

Company Name: Grafcor, Inc.  
Source Address: 601 NW 5th St., Richmond, IN 47374  
SSOA No.: S177-32331-0066  
Reviewer: Brian Wright

THROUGHPUT			
Press I.D.	MAXIMUM LINE SPEED (FEET/MIN)	MAXIMUM PRINT WIDTH (INCHES)	MMin <sup>2</sup> /YEAR
Harris 477	250	77	121414

INK VOCS																
Ink Name	Maximum Coverage (lbs/MMin <sup>2</sup> )	Weight % Diethanolamine	Weight % Ethylene Glycol	Weight % Xylene	Weight % Cumene	Weight % Toluene	Weight % Hexane	Flash Off %	Throughput (MMin <sup>2</sup> /Year)	Diethanolamine (tons/yr)	Ethylene Glycol (tons/yr)	Xylene (tons/yr)	Cumene (tons/yr)	Toluene (tons/yr)	Benzene (tons/yr)	Total HAP (tons/yr)
<b>Ink</b>																
WR Process Wax and Color Wax	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INXPro Process Black	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INXPro Process Cyan	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INXPro Process Magenta	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INX Pro Process Yellow	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PMS and Other Inks	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Coating</b>																
Vamish	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco C8000	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco Q5512B0	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco Coating Retarder	3	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	4.55	0.00	0.00	0.00	0.00	0.00	4.55
Nova AQ-641 General Purpose	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova AQ-650 Satin Aqua Coat	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova AQ-661 Dull Aqua Coat	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova AQ-670 Non Skid Aqua Coat	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fountain Solution</b>																
Preparation N Plus	0.14	0.0%	60.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	5.10	0.00	0.00	0.00	0.00	5.10
2451 Fountain Concentrate	0.14	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.85	0.00	0.00	0.00	0.00	0.85
Alkaless P	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkaless R	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkaless 3000	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Isopropyl alcohol	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3451 U Fountain Concentrate	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova 501 Fountain Solution	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova 902 Alcohol Substitute	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fountain Solution (as applied)	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Cleaning Solvents</b>																
Prisco Prepack (17.6 x 65.38)	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco Prepack (12 x 77.75)	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Autowash 6000	0.5	0.0%	0.0%	1.5%	1.2%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.02	0.02	0.00	0.00	0.04
MRC-F	0.5	0.0%	0.0%	30.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	9.11	0.00	0.00	0.00	9.11
Quick Wash	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aqueous Coating Cleaner	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Velocity Plate Cleaner	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EEZY Klene (16 oz)	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blanket Wash N	0.5	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	50.00%	121414	0.00	0.00	0.00	7.59	0.00	0.00	7.59
Royal Flush	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135 BLKT Blanket Wash	0.5	0.0%	0.0%	2.5%	0.0%	2.5%	0.0%	50.00%	121414	0.00	0.00	0.38	0.00	0.38	0.00	0.76
362 ROL Power Wash	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RBP Digi Plate Cleaner	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Miscellaneous</b>																
Super Inkosaver Aero Can (13 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FSC - Prisco Gum Arabic	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D-Stat Anti Static Spray (12.5 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	30.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.09	0.09
Silicon Spray (11 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	70.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.21	0.21
Force 40 Spray Cleaner (32 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scratch Remover (32 oz)	0.005	0.0%	0.0%	2.5%	2.5%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.01	0.01	0.00	0.00	0.02
CyberLube (16 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PLURCL Aerosol Can (16 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
No Skin (ink anti skinning cmpd)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tropaste (roller cleaning cmpd) 2.2 lb	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total(tons/yr)</b>										<b>4.55</b>	<b>5.10</b>	<b>9.11</b>	<b>0.03</b>	<b>7.59</b>	<b>0.21</b>	<b>17.45</b>

\*HAP (Tons/Year) = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight % HAP \* Flash off \* Throughput \* 1 Ton per 2000 pounds

METHODOLOGY

Throughput = Maximum line speed feet per minute \* Convert feet to inches \* Maximum print width inches \* 60 minutes per hour \* 8760  
HAP = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight percentage HAP \* Flash off \* Throughput \* Tons per 2000 pounds = Tons per year  
NOTE: HEAT SET OFFSET PRINTING HAS AN ASSUMED FLASH OFF OF 80%. OTHER TYPES OF PRINTERS H

Appendix A: Emissions Calculations  
VOC From Printing Press Operations

Company Name: Grafco, Inc.  
Source Address: 601 NW 5th St., Richmond, IN 47374  
SSOA No.: S177-32331-0066  
Reviewer: Brian Wright

THROUGHPUT			
Press I.D.	MAXIMUM LINE SPEED (FEET/MIN)	MAXIMUM PRINT WIDTH (INCHES)	MMin <sup>2</sup> /YEAR
Press 380	250	77	121414

INK VOCs																
Ink Name	Maximum Coverage	Weight % Diethanolamine	Weight % Ethylene Glycol	Weight % Xylene	Weight % Cumene	Weight % Toluene	Weight % Hexane	Flash Off %	Throughput (MMin <sup>2</sup> /Year)	Diethanolamine (tons/yr)	Ethylene Glycol (tons/yr)	Xylene (tons/yr)	Cumene (tons/yr)	Toluene (tons/yr)	Benzene (tons/yr)	Total HAP (tons/yr)
Press Id	(lbs/MMin <sup>2</sup> )															
<b>Ink</b>																
WR Process Wax and Color Wax	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INXPro Process Black	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INXPro Process Cyan	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INXPro Process Magenta	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INX Pro Process Yellow	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PMS and Other Inks	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Coating</b>																
Vamish	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco Q8000	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco Q5512B0	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco Coating Retarder	3	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	4.55	0.00	0.00	0.00	0.00	0.00	4.55
Nova AQ-641 General Purpose	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova AQ-650 Satin Aqua Coat	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova AQ-661 Dull Aqua Coat	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova AQ-670 Non Skid Aqua Coat	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fountain Solution</b>																
Preparation N Plus	0.14	0.0%	60.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	5.10	0.00	0.00	0.00	0.00	5.10
2451 Fountain Concentrate	0.14	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.85	0.00	0.00	0.00	0.00	0.85
Alkales P	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkales R	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkales 3000	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Isopropyl alcohol	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3451 U Fountain Concentrate	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova 501 Fountain Solution	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova 902 Alcohol Substitute	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fountain Solution (as applied)	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Cleaning Solvents</b>																
Prisco Prepack (17.6 x 65.38)	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco Prepack (12 x 77.75)	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Autowash 6000	0.5	0.0%	0.0%	1.5%	1.2%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.02	0.02	0.00	0.00	0.04
MRC-F	0.5	0.0%	0.0%	30.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	9.11	0.00	0.00	0.00	9.11
Quick Wash	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aqueous Coating Cleaner	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Velocity Plate Cleaner	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EEZY Klene (16 oz)	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blanket Wash N	0.5	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	50.00%	121414	0.00	0.00	0.00	0.00	7.59	0.00	7.59
Royal Flush	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135 BLKT Blanket Wash	0.5	0.0%	0.0%	2.5%	0.0%	2.5%	0.0%	50.00%	121414	0.00	0.38	0.00	0.38	0.00	0.00	0.76
362 ROL Power Wash	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RBP Digi Plate Cleaner	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Miscellaneous</b>																
Super Inkosaver Aero Can (13 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FSC - Prisco Gum Arabic	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D-Stat Anti Static Spray (12.5 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	30.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.09	0.09
Silicon Spray (11 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	70.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.21	0.21
Force 40 Spray Cleaner (32 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scratch Remover (32 oz)	0.005	0.0%	0.0%	2.5%	2.5%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.01	0.01	0.00	0.00	0.02
CyberLube (16 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PLURCL Aerosol Can (16 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
No Skin (ink anti skinning cmpd)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tropaste (roller cleaning cmpd) 2.2 lb	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
									<b>Total(tons/yr)</b>	<b>4.55</b>	<b>5.10</b>	<b>9.11</b>	<b>0.03</b>	<b>7.59</b>	<b>0.21</b>	<b>17.45</b>

\*HAP (Tons/Year) = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight % HAP \* Flash off \* Throughput \* 1 Ton per 2000 pounds

METHODOLOGY

Throughput = Maximum line speed feet per minute \* Convert feet to inches \* Maximum print width inches \* 60 minutes per hour \* 8760 hours per year = MMin<sup>2</sup> per Year

HAP = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight percentage HAP \* Flash off \* Throughput \* Tons per 2000 pounds = Tons per Year

NOTE: HEAT SET OFFSET PRINTING HAS AN ASSUMED FLASH OFF OF 80%. OTHER TYPES OF PRINTERS HAVE A FLASH OFF OF 100%.

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

**Company Name:** Grafcor, Inc.  
**Source Address:** 601 NW 5th St., Richmond, IN 47374  
**SSOA No.:** S177-32331-00066  
**Reviewer:** Brian Wright

	Fuel Type	Unit Type	Btu/hr
1	Natural Gas	Heater	300,000
2	Natural Gas	Heater	250,000
3	Natural Gas	Heater	250,000
4	Natural Gas	Heater	175,000
5	Natural Gas	Heater	250,000
6	Natural Gas	Heater	250,000
7	Natural Gas	Heater	150,000
8	Natural Gas	Heater	135,000
9	Natural Gas	Heater	200,000
10	Natural Gas	60 gal Hot Water Heater	40,000
11	Natural Gas	60 gal Hot Water Heater	40,000
<b>Total</b>			<b>2,040,000</b>

Heat Input Capacity  
MMBtu/hr

2.0

HHV  
mmBtu  
mmscf

1020

Potential Throughput  
MMCF/yr

17.5

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.0	0.1	0.1	0.0	0.9	0.0	0.7

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

PM2.5 emission factor is filterable and condensable PM2.5 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) is based on limits established under the External Combustion SSOA 326 IAC 2-9(b):

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

See page 2 for HAPs emissions calculations.

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

**Company Name:** Grafcor, Inc.  
**Source Address:** 601 NW 5th St., Richmond, IN 47374  
**SSOA No.:** S177-32331-00066  
**Reviewer:** Brian Wright  
**Date:** September 2012

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	1.8E-05	1.1E-05	6.6E-04	1.6E-02	3.0E-05

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	4.4E-06	9.6E-06	1.2E-05	3.3E-06	1.8E-05

**Total HAP (tons/yr)      0.02**

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.  
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.  
 See Page 3 for Greenhouse Gas calculations.

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

**Company Name:** Grafcor, Inc.  
**Source Address:** 601 NW 5th St., Richmond, IN 47374  
**SSOA No.:** S177-32331-00066  
**Reviewer:** Brian Wright  
**Date:** September 2012

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	1,051	0.02	0.02
Summed Potential Emissions in tons/yr	1,051		
CO2e Total in tons/yr	1,058		

**Methodology**

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.  
 Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.  
 Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.  
 $\text{Emission (tons/yr)} = \text{Throughput (MMCF/yr)} \times \text{Emission Factor (lb/MMCF)} / 2,000 \text{ lb/ton}$   
 $\text{CO2e (tons/yr)} = \text{CO2 Potential Emission ton/yr} \times \text{CO2 GWP (1)} + \text{CH4 Potential Emission ton/yr} \times \text{CH4 GWP (21)} + \text{N2O Potential Emission ton/yr} \times \text{N2O GWP (310)}.$

updated 7/11

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

**Company Name:** Grafcor, Inc.  
**Source Address:** 601 NW 5th St., Richmond, IN 47374  
**SSOA No.:** S177-32331-00066  
**Reviewer:** Brian Wright

SSOA Limited Throughput

MMCF/yr

1142.0
--------

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	1.1	4.3	4.3	0.3	57.1	3.1	48.0

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

PM2.5 emission factor is filterable and condensable PM2.5 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) is based on limits established under the External Combustion SSOA 326 IAC 2-9(b)(2)(B)

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

See page 2 for HAPs emissions calculations.

updated 7/11

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

**Company Name:** Grafcor, Inc.  
**Source Address:** 601 NW 5th St., Richmond, IN 47374  
**SSOA No.:** S177-32331-00066  
**Reviewer:** Brian Wright  
**Date:** September 2012

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	1.2E-03	6.9E-04	4.3E-02	1.0E+00	1.9E-03

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	2.9E-04	6.3E-04	8.0E-04	2.2E-04	1.2E-03

**Total HAP (tons/yr) 1.08**

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.  
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.  
 See Page 3 for Greenhouse Gas calculations.

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

**Company Name:** Grafcor, Inc.  
**Source Address:** 601 NW 5th St., Richmond, IN 47374  
**SSOA No.:** S177-32331-00066  
**Reviewer:** Brian Wright  
**Date:** September 2012

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	68,520	1.3	1.3
Summed Potential Emissions in tons/yr	68,523		
CO2e Total in tons/yr	68,937		

**Methodology**

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

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

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

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

Technical Support Document (TSD) for a New Source Review (NSR)  
Permit and a Source Specific Operating Agreement (SSOA)

**Source Description and Location**

<b>Source Name:</b>	<b>Grafcor, Inc.</b>
<b>Source Location:</b>	<b>601 NW 5th St., Richmond, IN 47374</b>
<b>County:</b>	<b>Wayne</b>
<b>SIC Code:</b>	<b>2752 (Commercial Printing, Lithographic)</b>
<b>Operation Permit No.:</b>	<b>S177-32331-00066</b>
<b>Permit Reviewer:</b>	<b>Brian Wright</b>

The Office of Air Quality (OAQ) has reviewed an application, submitted by Grafcor, Inc. on September 20, 2012 for a New Source Review (NSR) Permit and a Source Specific Operating Agreement (SSOA) for operation of a stationary printing operation.

**Existing Approvals**

The source has been operating under MSOP No. M177-25422-00066, issued on January 14, 2008.

Due to this application, the source is transitioning from a MSOP to a SSOA with New Source Review.

**Permit Level Determination – NSR and SSOA**

(a) This source is obtaining a New Source Review (NSR) Permit and Source Specific Operating Agreement (SSOA) for approval to construct (pursuant to 326 IAC 2-5.1-3) and operate (pursuant to 326 IAC 2-9) the following operations:

(1) External combustion sources complying with 326 IAC 2-9-13

Based on emission factors from EPA's Compilation of Air Pollutant Emission Factors AP-42, Chapter 1, External Combustion Sources, IDEM has determined that external combustion sources complying with the fuel usage limitations contained in this SSOA will have a limited PTE of CO and NO<sub>x</sub> greater than twenty-five (25) tons per year. Therefore, a New Source Review Permit for approval to construct is required for this operation pursuant to 326 IAC 2-5.1-3(a)(1)(E). See Appendix A for the calculations.

Pursuant to 326 IAC 2-9-13(b)(2)(B), the fuel usage for the external combustion units at this source shall be limited to less than one thousand four hundred forty-two million cubic feet (1142 MMcf) of natural gas per twelve (12) consecutive month period.

Note: These external combustion sources were not permitted under the existing MSOP, therefore, a NSR/SSOA has to be issued to satisfy the requirements.

(b) This source is also obtaining a Source Specific Operating Agreement (SSOA) for approval to operate (pursuant to 326 IAC 2-9) the following operations (Note: pursuant to 326 IAC 2-1.1-3(d), a New Source Review (NSR) Permit for approval to construct is not required for each of these operations):

(2) Surface coating or graphic arts operation complying with 326 IAC 2-9-2.5(b)(2)(B);

Pursuant to 326 IAC 2-9-2.5(b)(2)(B), the total amount of volatile organic compounds (VOC) and hazardous air pollutants (HAP), as supplied, delivered to the graphic arts operation shall not exceed the following:

- (a) the total amount of VOC shall not exceed two (2) tons per month,
- (b) the total amount of any single HAP shall not exceed eight hundred thirty-three (833) pounds per month, and
- (c) the total amount of any combination of HAP shall not exceed one (1) ton per month.

For a source that operates under 326 IAC 2-9 (Source Specific Operating Agreement Program), the source is required to comply with the pre-established emission limitations and standards contained in the specific SSOA(s) under 326 IAC 2-9. For a detailed description of the requirements specific to each SSOA, see 326 IAC 2-9.

#### Enforcement Issues

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

#### Federal Rule Applicability Determination

##### New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60.40c, Subpart Dc, are not included in the permit for the boilers and heaters at this source, because each unit has a capacity less than 10 million British thermal units per hour.
- (b) The requirements of the New Source Performance Standard (NSPS) for the Graphic Arts Industry: Publication Rotogravure Printing, 40 CFR 60, Subpart QQ (326 IAC 12), are not included in the permit, since the printing presses at this source are not rotogravure printing presses.
- (c) The requirements of the New Source Performance Standards for Pressure Sensitive Tape and Label Surface Coating Operations, 40 CFR 60, Subpart RR (60.440 to 60.447) (326 IAC 12), are not included in this permit, because this source does not manufacture pressure sensitive tape and label materials.
- (d) The requirements of the New Source Performance Standards (NSPS) for Flexible Vinyl and Urethane Coating and Printing Source, 40 CFR 60, Subpart FFF (326 IAC 12), are not included in the permit, since this source does not have any rotogravure printing presses used to print or coat flexible vinyl or urethane products.
- (e) The requirements of the New Source Performance Standards for Polymeric Coating of Supporting Substrates Facilities, 40 CFR 60, Subpart VVV (60.740 to 60.748) (326 IAC 12), are not included in this permit, because the source does not perform polymeric coating of supporting substrates, defined as web coating process that apply elastomers, polymers, or prepolymers to a supporting web other than paper, plastic film, metallic foil, or metal coil (40 CFR 60.741).
- (f) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for National Emission Standards for Halogenated Solvent Cleaning, 40 CFR 63, Subpart T (326 IAC 20-6), are not included in the permit because the solvent utilized at this source does not contain any of the halogenated compounds listed in 40 CFR 63.460(a).
- (h) The requirements for the National Emission Standards for Hazardous Air Pollutants for the Printing and Publishing Industry, 40 CFR 63, Subpart KK (326 IAC 20-18), are not included in this permit, because this source does not contain rotogravure or wide-web flexographic printing presses and this source is not a major source of HAPs.
- (i) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating, 40 CFR 63, Subpart JJJJ (326 IAC 20-65), are not included in the permit since this source is not a major source of HAPs.
- (j) The requirements of the National Emission Standards for Hazardous Air Pollutants: Printing, Coating, and Dyeing of Fabrics and Other Textiles, 40 CFR Part 63, Subpart OOOO (326 IAC 20-77), are not included in the permit because the source does not print, coat, or dye fabric or other textiles as defined in 40 CFR 63.4371 and is not a major source of HAPs.
- (k) The requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD (63.7480 through 63.7575) (326 IAC 20-95) are not included in the permit renewal, because this source is not a major source of HAPs.
- (l) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63.11193, Subpart JJJJJJ, are not included in the permit, since the boilers at this source are gas-fired boilers, as defined in 40 CFR 63.11237, and as such, are specifically listed as not being subject to Subpart JJJJJJ under 40 CFR 63.11195(e).
- (m) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

<b>State Rule Applicability Determination</b>
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The following state rules are applicable to the source:

- (a) 326 IAC 2-9 (Source Specific Operating Agreement Program)  
SSOA applicability is discussed under the Permit Level Determination – SSOA section above.
- (b) 326 IAC 5-1 (Opacity Limitations)  
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
  - (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
  - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

- (c) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)  
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.
- (d) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)  
The requirements of 326 IAC 6-5 are not included in the SSOA, since each of the SSOAs contained under 326 IAC 2-9 (Source Specific Operating Agreement Program) that limit fugitive emissions include pre-established fugitive dust control measures.
- (e) 326 IAC 12 (New Source Performance Standards)  
See Federal Rule Applicability Section of this TSD.
- (f) 326 IAC 20 (Hazardous Air Pollutants)  
See Federal Rule Applicability Section of this TSD.

#### **Compliance Determination, Monitoring, Record Keeping, and Reporting Requirements**

For a source that operates under 326 IAC 2-9 (Source Specific Operating Agreement Program), the source is required to comply with the pre-established emission limitations and standards, compliance determination, compliance monitoring, and record keeping and reporting requirements contained in the specific SSOA(s) under 326 IAC 2-9. For a detailed description of the requirements specific to each SSOA, see 326 IAC 2-9.

#### **Conclusion and Recommendation**

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on September 20, 2012

The operation of this source shall be subject to the conditions of the attached proposed New Source Review (NSR) Permit and SSOA No. S177-32331-00066. The staff recommends to the Commissioner that this NSR Permit and SSOA be approved.

#### **IDEM Contact**

- (a) Questions regarding this proposed permit can be directed to Brian Wright at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-6544 or toll free at 1-800-451-6027 extension 4-6544.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.in.gov/idem](http://www.in.gov/idem)

**Appendix A: Emission Calculations  
Emission Summary**

**Company Name:** Grafcor, Inc.  
**Source Address:** 601 NW 5th St., Richmond, IN 47374  
**SSOA No.:** S177-32331-00066  
**Reviewer:** Brian Wright  
**Date:** September 2012

**Unlimited Potential to Emit (tons/yr)**

Emission Units	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NOx	VOC	CO	GHGs as CO <sub>2</sub> e	TOTAL HAPs	Worst Single HAP
Planeta 364	0.00	0.00	0.00	0.00	0.00	189.13	0.00	0.00	35.55	21.55 Toluene
Harris 477	0.00	0.00	0.00	0.00	0.00	133.22	0.00	0.00	25.04	15.18 Toluene
Press 380	0.00	0.00	0.00	0.00	0.00	133.22	0.00	0.00	25.04	15.18 Toluene
Natural Gas	0.02	0.07	0.07	0.01	0.88	0.05	0.74	1058	0.02	0.00 Toluene
<b>Total</b>	<b>0.02</b>	<b>0.07</b>	<b>0.07</b>	<b>0.01</b>	<b>0.88</b>	<b>455.62</b>	<b>0.74</b>	<b>1058</b>	<b>85.65</b>	<b>51.90</b> Toluene

**Limited Potential to Emit (tons/yr)**

Emission Units	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NOx	VOC	CO	GHGs as CO <sub>2</sub> e	TOTAL HAPs	Worst Single HAP
Printing Presses*	0.00	0.00	0.00	0.00	0.00	24.00	0.00	0.00	12.00	4.98 Toluene
Natural Gas**	1.08	4.34	4.34	0.34	57.10	3.14	47.96	68937	1.08	0.00 Toluene
<b>Total</b>	<b>1.08</b>	<b>4.34</b>	<b>4.34</b>	<b>0.34</b>	<b>57.10</b>	<b>27.14</b>	<b>47.96</b>	<b>68937</b>	<b>13.08</b>	<b>4.98</b> Toluene

\*Pursuant to 326 IAC 2-9-2.5(b)(5), total VOC emissions from the 3 lithographic printers shall not exceed two (2) tons per month.

Total emissions from HAPs shall not exceed eight hundred thirty-three (833) pounds per month of any single HAP and one (1) tons per month of total HAP.

\*\*Pursuant to 326 IAC 2-9-13(b)(2)(B), the fuel usage for the external combustion units at this source shall be limited to less than one thousand four hundred forty-two million cubic feet (1142 MMcf) of natural gas per twelve (12) consecutive month period.

**Appendix A: Emissions Calculations  
VOC From Printing Press Operations**

**Company Name: Grafcor, Inc.**  
**Source Address: 601 NW 5th St., Richmond, IN 47374**  
**SSOA No.: S177-32331-00066**  
**Reviewer: Brian Wright**  
**Date: September 2012**

THROUGHPUT			
Press I.D.	MAXIMUM LINE SPEED (FEET/MIN)	MAXIMUM PRINT WIDTH (INCHES)	MMin <sup>2</sup> /YEAR
KBA 301922 - 64 inch	427	64	172363

INK VOCS					
Ink Name	Maxium Coverage (lbs/MMin <sup>2</sup> )	Weight % Volatiles*	Flash Off %	Throughput (MMin <sup>2</sup> /Year)	Emissions (tons/yr)
<b>Ink</b>					
WR Process Wax and Color Wax	3.4	1%	5.00%	172363	0.15
INXPro Process Black	3.4	20%	5.00%	172363	2.93
<b>INXPro Process Cyan</b>	<b>3.4</b>	<b>29%</b>	<b>5.00%</b>	<b>172363</b>	<b>4.28</b>
INXPro Process Magenta	3.4	23%	5.00%	172363	3.37
INX Pro Process Yellow	3.4	25%	5.00%	172363	3.66
PMS and Other Inks	3.4	17%	5.00%	172363	2.49
<b>Coating</b>					
Varnish	3	40%	5.00%	172363	5.15
Prisco Q8000	3	29%	100.00%	172363	74.98
Prisco Q5512B0	3	5%	100.00%	172363	12.93
Prisco Coating Retarder	3	50%	100.00%	172363	<b>129.27</b>
Nova AQ-641 General Purpose	3	3%	100.00%	172363	7.76
Nova AQ-650 Satin Aqua Coat	3	2%	100.00%	172363	5.17
Nova AQ-661 Dull Aqua Coat	3	3%	100.00%	172363	7.76
Nova AQ-670 Non Skid Aqua Coat	3	5%	100.00%	172363	12.93
<b>Fountain Solution</b>					
Preparation N Plus	0.14	54%	100.00%	172363	6.56
2451 Fountain Concentrate	0.14	19%	100.00%	172363	2.30
Alkaless P	0.14	61%	100.00%	172363	7.34
Alkaless R	0.14	99%	100.00%	172363	11.94
Alkaless 3000	0.14	81%	100.00%	172363	9.77
Isopropyl alcohol	0.14	100%	100.00%	172363	<b>12.07</b>
3451 U Fountain Concentrate	0.14	24%	100.00%	172363	2.90
Nova 501 Fountain Solution	0.14	21%	100.00%	172363	2.53
Nova 902 Alcohol Substitute	0.14	77%	100.00%	172363	9.29
<b>Cleaning Solvents</b>					
Prisco Prepack (17.6 x 65.38)	0.5	1%	100.00%	172363	0.43
Prisco Prepack (12 x 77.75)	0.5	1%	100.00%	172363	0.43
Autowash 6000	0.5	98%	5.00%	172363	2.11
MRC-F	0.5	100%	100.00%	172363	<b>43.09</b>
Quick Wash	0.5	100%	100.00%	172363	43.09
Aqueous Coating Cleaner	0.5	5%	100.00%	172363	2.15
Velocity Plate Cleaner	0.5	59%	100.00%	172363	25.42
EEZY Klene (16 oz)	0.5	94%	100.00%	172363	40.51
Blanket Wash N	0.5	100%	100.00%	172363	43.09
Royal Flush	0.5	16%	100.00%	172363	6.89
135 BLKT Blanket Wash	0.5	100%	100.00%	172363	43.09
362 ROL Power Wash	0.5	100%	5.00%	172363	2.15
RBP Digi Plate Cleaner	0.5	9%	100.00%	172363	3.88
<b>Miscellaneous</b>					
Super Inkosaver Aero Can (13 oz)	0.005	68%	100.00%	172363	0.29
FSC - Prisco Gum Arabic	0.005	1%	100.00%	172363	0.00
D-Stat Anti Static Spray (12.5 oz)	0.005	97%	100.00%	172363	<b>0.42</b>
Silicon Spray (11 oz)	0.005	89%	100.00%	172363	0.38
Force 40 Spray Cleaner (32 oz)	0.005	4%	100.00%	172363	0.02
Scratch Remover (32 oz)	0.005	13%	100.00%	172363	0.06
CyberLube (16 oz)	0.005	95%	100.00%	172363	0.41
PL/RCL Aerosol Can (16 oz)	0.005	50%	100.00%	172363	0.22
No Skin (ink anti skinning cmpd)	0.005	25%	100.00%	172363	0.11
Tropaste (roller cleaning cmpd) 2.2 lb	0.005	0%	100.00%	172363	0.00

<b>Total VOC Emissions =</b>	<b>189.13 Ton/yr</b>
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\*VOC (Tons/Year) = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight % volatiles (weight % of water & organics - weight % of water = weight % organics) \* Flash off \* Throughput \* 1 Ton per 2000 pounds

**METHODOLOGY**

Throughput = Maxium line speed feet per minute \* Convert feet to inches \* Maximum print width inches \* 60 minutes per hour \* 8760 hours per year = MMin<sup>2</sup> per Year

VOC = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight percentage volatiles (water minus organics) \* Flash off \* Throughput \* Tons per 2000 pounds = Tons per Year

NOTE: HEAT SET OFFSET PRINTING HAS AN ASSUMED FLASH OFF OF 80%. OTHER TYPES OF PRINTERS HAVE A FLASH OFF OF 100%.

(Source -OAQPS Draft Guidance, \*Control of Volatile Organic Compound Emissions from Offset Lithographic Printing (9/93) )

**Appendix A: Emissions Calculations  
VOC From Printing Press Operations**

**Company Name: Grafcor, Inc.**  
**Source Address: 601 NW 5th St., Richmond, IN 47374**  
**SSOA No.: S177-32331-00066**  
**Reviewer: Brian Wright**  
**Date: September 2012**

THROUGHPUT			
Press I.D.	MAXIMUM LINE SPEED (FEET/MIN)	MAXIMUM PRINT WIDTH (INCHES)	MMin <sup>2</sup> /YEAR
Harris 477	250	77	121414

INK VOCS					
Ink Name	Maxium Coverage (lbs/MMin <sup>2</sup> )	Weight % Volatiles*	Flash Off %	Throughput (MMin <sup>2</sup> /Year)	Emissions (tons/yr)
<b>Ink</b>					
WR Process Wax and Color Wax	3.4	1%	5.00%	121414	0.10
INXPro Process Black	3.4	20%	5.00%	121414	2.06
<b>INXPro Process Cyan</b>	<b>3.4</b>	<b>29%</b>	<b>5.00%</b>	<b>121414</b>	<b>3.02</b>
INXPro Process Magenta	3.4	23%	5.00%	121414	2.37
INX Pro Process Yellow	3.4	25%	5.00%	121414	2.58
PMS and Other Inks	3.4	17%	5.00%	121414	1.75
<b>Coating</b>					
Varnish	3	40%	5.00%	121414	3.63
Prisco Q8000	3	29%	100.00%	121414	52.81
Prisco Q5512B0	3	5%	100.00%	121414	9.11
Prisco Coating Retarder	3	50%	100.00%	121414	<b>91.06</b>
Nova AQ-641 General Purpose	3	3%	100.00%	121414	5.46
Nova AQ-650 Satin Aqua Coat	3	2%	100.00%	121414	3.64
Nova AQ-661 Dull Aqua Coat	3	3%	100.00%	121414	5.46
Nova AQ-670 Non Skid Aqua Coat	3	5%	100.00%	121414	9.11
<b>Fountain Solution</b>					
Preparation N Plus	0.14	54%	100.00%	121414	4.62
2451 Fountain Concentrate	0.14	19%	100.00%	121414	1.62
Alkaless P	0.14	61%	100.00%	121414	5.17
Alkaless R	0.14	99%	100.00%	121414	8.41
Alkaless 3000	0.14	81%	100.00%	121414	6.88
Isopropyl alcohol	0.14	100%	100.00%	121414	<b>8.50</b>
3451 U Fountain Concentrate	0.14	24%	100.00%	121414	2.04
Nova 501 Fountain Solution	0.14	21%	100.00%	121414	1.78
Nova 902 Alcohol Substitute	0.14	77%	100.00%	121414	6.54
<b>Cleaning Solvents</b>					
Prisco Prepack (17.6 x 65.38)	0.5	1%	100.00%	121414	0.30
Prisco Prepack (12 x 77.75)	0.5	1%	100.00%	121414	0.30
Autowash 6000	0.5	98%	5.00%	121414	1.49
MRC-F	0.5	100%	100.00%	121414	<b>30.35</b>
Quick Wash	0.5	100%	100.00%	121414	30.35
Aqueous Coating Cleaner	0.5	5%	100.00%	121414	1.52
Velocity Plate Cleaner	0.5	59%	100.00%	121414	17.91
EEZY Klene (16 oz)	0.5	94%	100.00%	121414	28.53
Blanket Wash N	0.5	100%	100.00%	121414	30.35
Royal Flush	0.5	16%	100.00%	121414	4.86
135 BLKT Blanket Wash	0.5	100%	100.00%	121414	30.35
362 ROL Power Wash	0.5	100%	5.00%	121414	1.52
RBP Digi Plate Cleaner	0.5	9%	100.00%	121414	2.73
<b>Miscellaneous</b>					
Super Inkosaver Aero Can (13 oz)	0.005	68%	100.00%	121414	0.21
FSC - Prisco Gum Arabic	0.005	1%	100.00%	121414	0.00
D-Stat Anti Static Spray (12.5 oz)	0.005	97%	100.00%	121414	<b>0.29</b>
Silicon Spray (11 oz)	0.005	89%	100.00%	121414	0.27
Force 40 Spray Cleaner (32 oz)	0.005	4%	100.00%	121414	0.01
Scratch Remover (32 oz)	0.005	13%	100.00%	121414	0.04
CyberLube (16 oz)	0.005	95%	100.00%	121414	0.29
PL/RCL Aerosol Can (16 oz)	0.005	50%	100.00%	121414	0.15
No Skin (ink anti skinning cmpd)	0.005	25%	100.00%	121414	0.08
Tropaste (roller cleaning cmpd) 2.2 lb	0.005	0%	100.00%	121414	0.00

<b>Total VOC Emissions =</b>	<b>133.22 Ton/yr</b>
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\*VOC (Tons/Year) = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight % volatiles (weight % of water & organics - weight % of water = weight % organics) \* Flash off \* Throughput \* 1 Ton per 2000 pounds

**METHODOLOGY**

Throughput = Maxium line speed feet per minute \* Convert feet to inches \* Maximum print width inches \* 60 minutes per hour \* 8760 hours per year = MMin<sup>2</sup> per Year

VOC = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight percentage volatiles (water minus organics) \* Flash off \* Throughput \* Tons per 2000 pounds = Tons per Year

NOTE: HEAT SET OFFSET PRINTING HAS AN ASSUMED FLASH OFF OF 80%. OTHER TYPES OF PRINTERS HAVE A FLASH OFF OF 100%.

(Source -OAQPS Draft Guidance, \*Control of Volatile Organic Compound Emissions from Offset Lithographic Printing (9/93) )

**Appendix A: Emissions Calculations  
VOC From Printing Press Operations**

**Company Name: Grafcor, Inc.**  
**Source Address: 601 NW 5th St., Richmond, IN 47374**  
**SSOA No.: S177-32331-00066**  
**Reviewer: Brian Wright**  
**Date: September 2012**

THROUGHPUT			
Press I.D.	MAXIMUM LINE SPEED (FEET/MIN)	MAXIMUM PRINT WIDTH (INCHES)	MMin <sup>2</sup> /YEAR
Press 380	250	77	121414

INK VOCS					
Ink Name	Maxium Coverage (lbs/MMin <sup>2</sup> )	Weight % Volatiles*	Flash Off %	Throughput (MMin <sup>2</sup> /Year)	Emissions (tons/yr)
<b>Ink</b>					
WR Process Wax and Color Wax	3.4	1%	5.00%	121414	0.10
INXPro Process Black	3.4	20%	5.00%	121414	2.06
<b>INXPro Process Cyan</b>	<b>3.4</b>	<b>29%</b>	<b>5.00%</b>	<b>121414</b>	<b>3.02</b>
INXPro Process Magenta	3.4	23%	5.00%	121414	2.37
INX Pro Process Yellow	3.4	25%	5.00%	121414	2.58
PMS and Other Inks	3.4	17%	5.00%	121414	1.75
<b>Coating</b>					
Varnish	3	40%	5.00%	121414	3.63
Prisco Q8000	3	29%	100.00%	121414	52.81
Prisco Q5512B0	3	5%	100.00%	121414	9.11
Prisco Coating Retarder	3	50%	100.00%	121414	<b>91.06</b>
Nova AQ-641 General Purpose	3	3%	100.00%	121414	5.46
Nova AQ-650 Satin Aqua Coat	3	2%	100.00%	121414	3.64
Nova AQ-661 Dull Aqua Coat	3	3%	100.00%	121414	5.46
Nova AQ-670 Non Skid Aqua Coat	3	5%	100.00%	121414	9.11
<b>Fountain Solution</b>					
Preparation N Plus	0.14	54%	100.00%	121414	4.62
2451 Fountain Concentrate	0.14	19%	100.00%	121414	1.62
Alkaless P	0.14	61%	100.00%	121414	5.17
Alkaless R	0.14	99%	100.00%	121414	8.41
Alkaless 3000	0.14	81%	100.00%	121414	6.88
Isopropyl alcohol	0.14	100%	100.00%	121414	<b>8.50</b>
3451 U Fountain Concentrate	0.14	24%	100.00%	121414	2.04
Nova 501 Fountain Solution	0.14	21%	100.00%	121414	1.78
Nova 902 Alcohol Substitute	0.14	77%	100.00%	121414	6.54
<b>Cleaning Solvents</b>					
Prisco Prepack (17.6 x 65.38)	0.5	1%	100.00%	121414	0.30
Prisco Prepack (12 x 77.75)	0.5	1%	100.00%	121414	0.30
Autowash 6000	0.5	98%	5.00%	121414	1.49
MRC-F	0.5	100%	100.00%	121414	<b>30.35</b>
Quick Wash	0.5	100%	100.00%	121414	30.35
Aqueous Coating Cleaner	0.5	5%	100.00%	121414	1.52
Velocity Plate Cleaner	0.5	59%	100.00%	121414	17.91
EEZY Klene (16 oz)	0.5	94%	100.00%	121414	28.53
Blanket Wash N	0.5	100%	100.00%	121414	30.35
Royal Flush	0.5	16%	100.00%	121414	4.86
135 BLKT Blanket Wash	0.5	100%	100.00%	121414	30.35
362 ROL Power Wash	0.5	100%	5.00%	121414	1.52
RBP Digi Plate Cleaner	0.5	9%	100.00%	121414	2.73
<b>Miscellaneous</b>					
Super Inkosaver Aero Can (13 oz)	0.005	68%	100.00%	121414	0.21
FSC - Prisco Gum Arabic	0.005	1%	100.00%	121414	0.00
D-Stat Anti Static Spray (12.5 oz)	0.005	97%	100.00%	121414	<b>0.29</b>
Silicon Spray (11 oz)	0.005	89%	100.00%	121414	0.27
Force 40 Spray Cleaner (32 oz)	0.005	4%	100.00%	121414	0.01
Scratch Remover (32 oz)	0.005	13%	100.00%	121414	0.04
CyberLube (16 oz)	0.005	95%	100.00%	121414	0.29
PL/RCL Aerosol Can (16 oz)	0.005	50%	100.00%	121414	0.15
No Skin (ink anti skinning cmpd)	0.005	25%	100.00%	121414	0.08
Tropaste (roller cleaning cmpd) 2.2 lb	0.005	0%	100.00%	121414	0.00

<b>Total VOC Emissions =</b>	<b>133.22 Ton/yr</b>
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\*VOC (Tons/Year) = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight % volatiles (weight % of water & organics - weight % of water = weight % organics) \* Flash off \* Throughput \* 1 Ton per 2000 pounds

**METHODOLOGY**

Throughput = Maxium line speed feet per minute \* Convert feet to inches \* Maximum print width inches \* 60 minutes per hour \* 8760 hours per year = MMin<sup>2</sup> per Year

VOC = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight percentage volatiles (water minus organics) \* Flash off \* Throughput \* Tons per 2000 pounds = Tons per Year

NOTE: HEAT SET OFFSET PRINTING HAS AN ASSUMED FLASH OFF OF 80%. OTHER TYPES OF PRINTERS HAVE A FLASH OFF OF 100%.

(Source -OAQPS Draft Guidance, \*Control of Volatile Organic Compound Emissions from Offset Lithographic Printing (9/93) )

Appendix A: Emissions Calculations  
VOC From Printing Press Operations

Company Name: Grafcor, Inc.  
Source Address: 601 NW 5th St, Richmond, IN 47374  
SSOA No.: S177-32331-00066  
Reviewer: Brian Wright  
Date: September 2012

THROUGHPUT			
Press I.D.	MAXIMUM LINE SPEED (FEET/MIN)	MAXIMUM PRINT WIDTH (INCHES)	MMin <sup>2</sup> /YEAR
KBA 301922 - 64 inch	427	64	172363

INK VOCS																
Ink Name	Maximum Coverage	Weight % Diethanolamine	Weight % Ethylene Glycol	Weight % Xylene	Weight % Cumene	Weight % Toluene	Weight % Hexane	Flash Off %	Throughput	Diethanolamine	Ethylene Glycol	Xylene	Cumene	Toluene	Benzene	Total HAP
Press Id	(lbs/MMin <sup>2</sup> )								(MMin <sup>2</sup> /Year)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)
<b>Ink</b>																
WR Process Wax and Color Wax	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INXPro Process Black	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INXPro Process Cyan	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INXPro Process Magenta	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INX Pro Process Yellow	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PMS and Other Inks	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Coating</b>																
Varnish	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco Q8000	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco Q5512B0	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco Coating Retarder	3	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	6.46	0.00	0.00	0.00	0.00	0.00	6.46
Nova AQ-641 General Purpose	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova AQ-650 Satin Aqua Coat	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova AQ-661 Dull Aqua Coat	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova AQ-670 Non Skid Aqua Coat	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fountain Solution</b>																
Preparation N Plus	0.14	0.0%	60.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	7.24	0.00	0.00	0.00	0.00	7.24
2451 Fountain Concentrate	0.14	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	1.21	0.00	0.00	0.00	0.00	1.21
Alkaless P	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkaless R	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkaless 3000	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Isopropyl alcohol	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3451 U Fountain Concentrate	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova 501 Fountain Solution	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova 502 Alcohol Substitute	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Cleaning Solvents</b>																
Prisco Prepack (17.6 x 65.38)	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco Prepack (12 x 77.75)	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Autowash 6000	0.5	0.0%	0.0%	1.5%	1.2%	0.0%	0.0%	5.00%	172363	0.00	0.00	0.03	0.03	0.00	0.00	0.06
MRC-F	0.5	0.0%	0.0%	30.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	12.93	0.00	0.00	0.00	12.93
Quick Wash	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aqueous Coating Cleaner	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Velocity Plate Cleaner	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EEZY Klene (16 oz)	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blanket Wash N	0.5	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	21.55	0.00	21.55
Royal Flush	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135 BLKT Blanket Wash	0.5	0.0%	0.0%	2.5%	0.0%	2.5%	0.0%	100.00%	172363	0.00	0.00	1.08	0.00	1.08	0.00	2.15
362 ROL Power Wash	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RBP Digi Plate Cleaner	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Miscellaneous</b>																
Super Inkosaver Aero Can (13 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FSC - Prisco Gum Arabic	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D-Stat Anti Static Spray (12.5 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	30.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.13	0.13
Silicon Spray (11 oz)	0.005	0.0%	0.0%	0.0%	0.0%	70.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.30	0.30
Force 40 Spray Cleaner (32 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scratch Remover (32 oz)	0.005	0.0%	0.0%	2.5%	2.5%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.01	0.01	0.00	0.00	0.02
CyberLube (16 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PL/RCL Aerosol Can (16 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
No Skin (ink anti skinning cmpd)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tropaste (roller cleaning cmpd) 2.2 lb	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	172363	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total(tons/yr)</b>										<b>6.46</b>	<b>7.24</b>	<b>12.94</b>	<b>0.04</b>	<b>21.55</b>	<b>0.30</b>	<b>35.55</b>

Worst Case Emissions used for each chemical type

\*HAP (Tons/Year) = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight % HAP \* Flash off \* Throughput \* 1 Ton per 2000 pounds

METHODOLOGY

Throughput = Maximum line speed feet per minute \* Convert feet to inches \* Maximum print width inches \* 60 minutes per hour \* 8760 hours per year = MMin<sup>2</sup> per Year

HAP = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight percentage HAP \* Flash off \* Throughput \* Tons per 2000 pounds = Tons per Year

NOTE: HEAT SET OFFSET PRINTING HAS AN ASSUMED FLASH OFF OF 80%. OTHER TYPES OF PRINTERS HAVE A FLASH OFF OF printing.xls 9/95

Appendix A: Emissions Calculations  
VOC From Printing Press Operations

Company Name: Grafcor, Inc.  
Source Address: 601 NW 5th St., Richmond, IN 47374  
SSOA No.: S177-32331-00066  
Reviewer: Brian Wright  
Date: September 2012

THROUGHPUT			
Press I.D.	MAXIMUM LINE SPEED (FEET/MIN)	MAXIMUM PRINT WIDTH (INCHES)	MMin <sup>2</sup> /YEA R
Harris 477	250	77	121414

INK VOCS																
Ink Name	Maximum Coverage	Weight % Diethanolamine	Weight % Ethylene Glycol	Weight % Xylene	Weight % Cumene	Weight % Toluene	Weight % Hexane	Flash Off %	Throughput	Diethanolamine	Ethylene Glycol	Xylene	Cumene	Toluene	Benzene	Total HAP
Press Id	(lbs/MMin <sup>2</sup> )								(MMin <sup>2</sup> /Year)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)
<b>Ink</b>																
WR Process Wax and Color Wax	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INXPro Process Black	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INXPro Process Cyan	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INXPro Process Magenta	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INX Pro Process Yellow	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PMS and Other Inks	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Coating</b>																
Varnish	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco Q8000	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco C5512B0	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco Coating Retarder	3	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	4.55	0.00	0.00	0.00	0.00	0.00	4.55
Nova AQ-641 General Purpose	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova AQ-650 Satin Aqua Coat	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova AQ-661 Dull Aqua Coat	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova AQ-670 Non Skid Aqua Coat	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fountain Solution</b>																
Preparation N Plus	0.14	0.0%	60.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	5.10	0.00	0.00	0.00	0.00	5.10
2451 Fountain Concentrate	0.14	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.85	0.00	0.00	0.00	0.00	0.85
Alkaless P	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkaless R	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkaless 3000	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Isopropyl alcohol	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3451 U Fountain Concentrate	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova 501 Fountain Solution	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova 902 Alcohol Substitute	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Cleaning Solvents</b>																
Prisco Prepack (17.6 x 65.38)	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco Prepack (12 x 77.75)	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Autowash 6000	0.5	0.0%	0.0%	1.5%	1.2%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.02	0.02	0.00	0.00	0.04
MRC-F	0.5	0.0%	0.0%	30.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	9.11	0.00	0.00	0.00	9.11
Quick Wash	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aqueous Coating Cleaner	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Velocity Plate Cleaner	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EEZY Klene (16 oz)	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blanket Wash N	0.5	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	15.18	0.00	15.18
Royal Flush	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135 BLKT Blanket Wash	0.5	0.0%	0.0%	2.5%	0.0%	2.5%	0.0%	100.00%	121414	0.00	0.00	0.76	0.00	0.76	0.00	1.52
362 ROL Power Wash	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RBP Digi Plate Cleaner	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Miscellaneous</b>																
Super Inkosaver Aero Can (13 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FSC - Prisco Gum Arabic	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D-Stat Anti Static Spray (12.5 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	30.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.09	0.09
Silicon Spray (11 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	70.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.21	0.21
Force 40 Spray Cleaner (32 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scratch Remover (32 oz)	0.005	0.0%	0.0%	2.5%	2.5%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.01	0.01	0.00	0.00	0.02
CyberLube (16 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PL/RCL Aerosol Can (16 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
No Skin (ink anti skinning cmpd)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tropaste (roller cleaning cmpd) 2.2 lb	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total(tons/yr)</b>										<b>4.55</b>	<b>5.10</b>	<b>9.11</b>	<b>0.03</b>	<b>15.18</b>	<b>0.21</b>	<b>25.04</b>

\*HAP (Tons/Year) = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight % HAP \* Flash off \* Throughput \* 1 Ton per 2000 pounds

METHODOLOGY

Throughput = Maximum line speed feet per minute \* Convert feet to inches \* Maximum print width inches \* 60 minutes per hour \* 8

HAP = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight percentage HAP \* Flash off \* Throughput \* Tons per 2000 pounds = Ton

NOTE: HEAT SET OFFSET PRINTING HAS AN ASSUMED FLASH OFF OF 80%. OTHER TYPES OF PRINTER

Appendix A: Emissions Calculations  
VOC From Printing Press Operations

Company Name: Grafcor, Inc.  
Source Address: 801 NW 5th St., Richmond, IN 47374  
SSOA No.: S177-32331-00066  
Reviewer: Brian Wright  
Date: September 2012

THROUGHPUT			
Press ID.	MAXIMUM LINE SPEED (FEET/MIN)	MAXIMUM PRINT WIDTH (INCHES)	MMin <sup>2</sup> /YEAR
Press 380	250	77	121414

INK VOCS																
Ink Name	Maximum Coverage (lbs/MMin <sup>2</sup> )	Weight % Diethanolamine	Weight % Ethylene Glycol	Weight % Xylene	Weight % Cumene	Weight % Toluene	Weight % Hexane	Flash Off %	Throughput (MMin <sup>2</sup> /Year)	Diethanolamine (tons/yr)	Ethylene Glycol (tons/yr)	Xylene (tons/yr)	Cumene (tons/yr)	Toluene (tons/yr)	Benzene (tons/yr)	Total HAP (tons/yr)
<b>Ink</b>																
WR Process Wax and Color Wax	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INXPro Process Black	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INXPro Process Cyan	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INXPro Process Magenta	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INX Pro Process Yellow	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PMS and Other Inks	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Coating</b>																
Varnish	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco Q8000	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco Q5512B0	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco Coating Retarder	3	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	4.55	0.00	0.00	0.00	0.00	0.00	4.55
Nova AQ-641 General Purpose	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova AQ-650 Satin Aqua Coat	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova AQ-661 Dull Aqua Coat	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova AQ-670 Non Skid Aqua Coat	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fountain Solution</b>																
Preparation N Plus	0.14	0.0%	60.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	5.10	0.00	0.00	0.00	0.00	5.10
2451 Fountain Concentrate	0.14	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.85	0.00	0.00	0.00	0.00	0.85
Alkales P	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkales R	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alkales 3000	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Isopropyl alcohol	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3451 U Fountain Concentrate	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova 501 Fountain Solution	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nova 902 Alcohol Substitute	0.14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Cleaning Solvents</b>																
Prisco Prepack (17.6 x 65.38)	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prisco Prepack (12 x 77.75)	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Autowash 6000	0.5	0.0%	0.0%	1.5%	1.2%	0.0%	0.0%	100.00%	121414	0.00	0.02	0.02	0.00	0.00	0.00	0.04
MRC-F	0.5	0.0%	0.0%	30.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	9.11	0.00	0.00	0.00	9.11
Quick Wash	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aqueous Coating Cleaner	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Velocity Plate Cleaner	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EEZY Klene (16 oz)	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blanket Wash N	0.5	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	15.18	0.00	15.18
Royal Flush	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135 BLKT Blanket Wash	0.5	0.0%	0.0%	2.5%	0.0%	2.5%	0.0%	100.00%	121414	0.00	0.00	0.76	0.00	0.76	0.00	1.52
362 ROL Power Wash	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RBP Digi Plate Cleaner	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Miscellaneous</b>																
Super Inkosaver Aero Can (13 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FSC - Prisco Gum Arabic	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D-Stat Anti Static Spray (12.5 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	30.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.09	0.09
Silicon Spray (11 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	70.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.21	0.21
Force 40 Spray Cleaner (32 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scratch Remover (32 oz)	0.005	0.0%	0.0%	2.5%	2.5%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.01	0.01	0.00	0.00	0.02
CyberLube (16 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PLURCL Aerosol Can (16 oz)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
No Skin (ink anti skinning cmpd)	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tropaste (roller cleaning cmpd) 2.2 lb	0.005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.00%	121414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total(tons/yr)</b>										<b>4.55</b>	<b>5.10</b>	<b>9.11</b>	<b>0.03</b>	<b>15.18</b>	<b>0.21</b>	<b>25.04</b>

\*HAP (Tons/Year) = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight % HAP \* Flash off \* Throughput \* 1 Ton per 2000 pounds

METHODOLOGY

Throughput = Maximum line speed feet per minute \* Convert feet to inches \* Maximum print width inches \* 60 minutes per hour \* 8760 hours per year = MMin<sup>2</sup> per Year  
HAP = Maximum Coverage pounds per MMin<sup>2</sup> \* Weight percentage HAP \* Flash off \* Throughput \* Tons per 2000 pounds = Tons per Year  
NOTE: HEAT SET OFFSET PRINTING HAS AN ASSUMED FLASH OFF OF 80%. OTHER TYPES OF PRINTERS HAVE A FLASH OFF OF 100%.

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

**Company Name:** Grafcor, Inc.  
**Source Address:** 601 NW 5th St., Richmond, IN 47374  
**SSOA No.:** S177-32331-00066  
**Reviewer:** Brian Wright  
**Date:** September 2012

	Fuel Type	Unit Type	Btu/hr
1	Natural Gas	Heater	300,000
2	Natural Gas	Heater	250,000
3	Natural Gas	Heater	250,000
4	Natural Gas	Heater	175,000
5	Natural Gas	Heater	250,000
6	Natural Gas	Heater	250,000
7	Natural Gas	Heater	150,000
8	Natural Gas	Heater	135,000
9	Natural Gas	Heater	200,000
10	Natural Gas	60 gal Hot Water Heater	40,000
11	Natural Gas	60 gal Hot Water Heater	40,000
<b>Total</b>			<b>2,040,000</b>

Heat Input Capacity  
MMBtu/hr

2.0

HHV  
mmBtu  
mmscf

1020

Potential Throughput  
MMCF/yr

17.5

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.0	0.1	0.1	0.0	0.9	0.0	0.7

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

PM2.5 emission factor is filterable and condensable PM2.5 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) is based on limits established under the External Combustion SSOA 326 IAC 2-9(b):

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

See page 2 for HAPs emissions calculations.

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

**Company Name:** Grafcor, Inc.  
**Source Address:** 601 NW 5th St., Richmond, IN 47374  
**SSOA No.:** S177-32331-00066  
**Reviewer:** Brian Wright  
**Date:** September 2012

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	1.8E-05	1.1E-05	6.6E-04	1.6E-02	3.0E-05

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	4.4E-06	9.6E-06	1.2E-05	3.3E-06	1.8E-05

**Total HAP (tons/yr)      0.02**

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.  
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.  
 See Page 3 for Greenhouse Gas calculations.

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

**Company Name:** Grafcor, Inc.  
**Source Address:** 601 NW 5th St., Richmond, IN 47374  
**SSOA No.:** S177-32331-00066  
**Reviewer:** Brian Wright  
**Date:** September 2012

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	1,051	0.02	0.02
Summed Potential Emissions in tons/yr	1,051		
CO2e Total in tons/yr	1,058		

**Methodology**

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.  
 Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.  
 Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.  
 $Emission (tons/yr) = Throughput (MMCF/yr) \times Emission\ Factor (lb/MMCF) / 2,000\ lb/ton$   
 $CO2e (tons/yr) = CO2\ Potential\ Emission\ ton/yr \times CO2\ GWP (1) + CH4\ Potential\ Emission\ ton/yr \times CH4\ GWP (21) + N2O\ Potential\ Emission\ ton/yr \times N2O\ GWP (310).$

updated 7/11

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

**Company Name:** Grafcor, Inc.  
**Source Address:** 601 NW 5th St., Richmond, IN 47374  
**SSOA No.:** S177-32331-00066  
**Reviewer:** Brian Wright  
**Date:** September 2012

SSOA Limited Throughput

MMCF/yr

1142.0
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Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	1.1	4.3	4.3	0.3	57.1	3.1	48.0

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

PM2.5 emission factor is filterable and condensable PM2.5 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) is based on limits established under the External Combustion SSOA 326 IAC 2-9(b)(2)(B)

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

See page 2 for HAPs emissions calculations.

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

**Company Name:** Grafcor, Inc.  
**Source Address:** 601 NW 5th St., Richmond, IN 47374  
**SSOA No.:** S177-32331-00066  
**Reviewer:** Brian Wright  
**Date:** September 2012

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	1.2E-03	6.9E-04	4.3E-02	1.0E+00	1.9E-03

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	2.9E-04	6.3E-04	8.0E-04	2.2E-04	1.2E-03

**Total HAP (tons/yr) 1.08**

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.  
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.  
 See Page 3 for Greenhouse Gas calculations.

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

**Company Name:** Grafcor, Inc.  
**Source Address:** 601 NW 5th St., Richmond, IN 47374  
**SSOA No.:** S177-32331-00066  
**Reviewer:** Brian Wright  
**Date:** September 2012

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	68,520	1.3	1.3
Summed Potential Emissions in tons/yr	68,523		
CO2e Total in tons/yr	68,937		

**Methodology**

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

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

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
**Governor**

*Thomas W. Easterly*  
**Commissioner**

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

## SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Robert Frew  
Grafcor, Inc  
601 NW 5<sup>th</sup> Street  
Richmond, IN 47374

DATE: December 11, 2012

FROM: Matt Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

SUBJECT: Final Decision  
SSOA  
177-32331-00066

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:  
Gary Jones (Printing Industries of America)  
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at [jbrush@idem.IN.gov](mailto:jbrush@idem.IN.gov).

Final Applicant Cover letter.dot 11/30/07



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[www.idem.IN.gov](http://www.idem.IN.gov)

December 11, 2012

TO: Morrison Reeves Public Library

From: Matthew Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

**Applicant Name: Grafcor, Inc**  
**Permit Number: 177-32331-00066**

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures  
Final Library.dot 11/30/07

# Mail Code 61-53

IDEM Staff	MIDENNEY 12/11/2012 Grafcor, Inc. 177-32331-00066 (final)		Type of Mail:  <b>CERTIFICATE OF MAILING ONLY</b>	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

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1		Robert Frew Grafcor, Inc. 601 NW 5th Street Richmond IN 47374 (Source CAATS) via confirmed delivery										
2		Morrisson Reeves Public Library 80 N 6th St Richmond IN 47374-3079 (Library)										
3		Mr. Thomas Lee Clevenger 4005 South Franks Lane Selma IN 47383 (Affected Party)										
4		Wayne County Commissioners 401 East Main Street Richmond IN 47374 (Local Official)										
5		Mr. Randall Shrock 2764 Abington Pike Richmond IN 47374 (Affected Party)										
6		Wayne County Health Department 401 E. Main Street Richmond IN 47374-4388 (Health Department)										
7		Gary Jones Printing Industries of America 200 Deer Run Road Sewickley PA 15143 (Consultant)										
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