

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT

PERMITTEE

Bruce Offset
Attn: Ken Metzger - Plant Maintenance Supervisor
1099 Greenleaf Avenue
Elk Grove Village, Illinois 60007

<u>Application No.:</u> 04070001	<u>I.D. No.:</u> 031440AFJ
<u>Applicant's Designation:</u>	<u>Date Received:</u> July 1, 2004
<u>Subject:</u> Printing	
<u>Date Issued:</u> April 5, 2007	<u>Expiration Date:</u> April 5, 2012
<u>Location:</u> 1099 Greenleaf Avenue, Elk Grove Village, Cook County, 60007	

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of 5 sheet-fed offset lithographic printing presses, 2 duplicators, 2 inkjet printers, roll feed digital color printers, and natural gas fired combustion equipment pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued;
 - i. To limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year for volatile organic material (VOM), 10 tons/year for a single hazardous air pollutant (HAP) and 25 tons/year for totaled HAPs). As a result the source is excluded from the requirement to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
 - ii. To limit the potential emissions of VOM from the source to less than 25 tons/year. As a result, the source is excluded from the requirement of 35 Ill. Adm. Code Part 205, Emission Reduction Market System. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
 - iii. This permit is issued based upon the plant not being subject to the requirements of 35 Ill. Adm. Code Part 218 Subpart TT, Other Emission Units. This is consequence of the federally enforceable production and operating limitations, which restrict a potential to emit VOM from emission units not regulated by 35 Ill. Adm. Code 218 Subpart H to less than 25 tons per year.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.

- c. This permit supersedes all operating permits issued for this location.
- 2a. Pursuant to 35 Ill. Adm. Code 218.407(a), no owner or operator of lithographic printing line(s) subject to the requirements of 35 Ill. Adm. Code 218 Subpart H shall:
 - i. Cause or allow the operation of any sheet-fed offset lithographic printing line unless:
 - A. The VOM content of the as-applied fountain solution is 5 percent or less, by volume; or
 - B. The VOM content of the as-applied fountain solution is 8.5 percent or less, by volume, and the temperature of the fountain solution is maintained below 15.6°C (60°F), measured at the reservoir or the fountain tray.
 - ii. Cause or allow the use of a cleaning solution on any lithographic printing line unless:
 - A. The VOM content of the as-used cleaning solution is less than or equal to 30 percent, by weight; or
 - B. The VOM composite partial vapor pressure of the as-used cleaning solution is less than 10 mmHg at 20°C (68°F).
 - iii. Cause or allow VOM containing cleaning materials, including used cleaning towels, associated with any lithographic printing line to be kept, stored or disposed of in any manner other than in closed containers.
- b. Pursuant to 35 Ill. Adm. Code 218.301, no person shall cause or allow the discharge of more than 3.6 kg/hour (8 lbs/hour) of organic material into the atmosphere from any emission unit, except as provided in 35 Ill. Adm. Code 218.302, 218.303, 218.304 and the following exception: if no odor nuisance exists the limitation of 35 Ill. Adm. Code 218 Subpart G shall apply only to photochemically reactive material.
- 3a. VOM emissions from the sheet-fed offset printing presses, inkjet printers, 2 duplicators, and roll feed digital color printers shall not exceed 2.5 tons/month and 24.5 tons/year.
- b. The VOM emissions shall be calculated using the following:
 - i. The owner or operator may presume 95% retention of VOM in the substrate for non-heatset lithographic printing inks and varnishes.
 - ii. For manual cleaning solution used on affected printing lines a 50% emission factor of the cleaning solution used may be presumed as stated in USEPA's Alternative Control Techniques Document Offset Lithographic Printing (EPA 453/R-94054, June 1994).

- iii. VOM emissions from non-heatset ink and varnish usage = ink usage x VOM content x 0.05.
 - iv. VOM emissions from low vapor pressure (10 mmHg at 20°C) manual cleaning solution = manual VOM cleaning solution usage x VOM content x 0.5.
 - v. VOM emissions from other materials = material usage x VOM content.
- c. The inkjet printers, duplicators, and roll feed digital color printers are not subject to the control requirements of 35 Ill. Adm. Code 218.986 of Subpart TT due as a result of the limitation on the source's emissions of VOM being below 25 tons per year, as established in this permit.
4. The emissions of Hazardous Air Pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act shall not equal or exceed 10 tons per year of any single HAP or 25 tons per year of any combination of such HAPs, or such lesser quantity as USEPA may establish in rule which would require the Permittee to obtain a CAAPP permit from the Illinois EPA. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirement to obtain a CAAPP permit from the Illinois EPA.
- 5a. Operation and emissions of the natural gas fired combustion equipment shall not exceed the following limits:
- i. Natural Gas Usage: 7.2 mmscf/month and 72 mmscf/year
 - ii. Emissions of nitrogen oxide (NO_x), carbon monoxide (CO), particulate matter (PM), volatile organic material (VOM), and sulfur dioxide (SO₂):

<u>Pollutant</u>	<u>Emission Factor</u> <u>(Lbs/mmscf)</u>	<u>Emissions</u> <u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
Nitrogen Oxides (NO _x)	100	0.36	3.60
Carbon Monoxide (CO)	84	0.30	3.02
Particulate Matter (PM)	7.6	0.03	0.27
Volatile Organic Material (VOM)	5.5	0.02	0.20
Sulfur Dioxide (SO ₂)	0.6	0.01	0.02

- b. These limits are based on the maximum equipment operations and standard emission factors given by AP-42.
 - c. Compliance with the annual limits of this permit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).
- 6a. Pursuant to 35 Ill. Adm. Code 218.409(a), testing to demonstrate compliance with the requirements of 35 Ill. Adm. Code 218.407 shall be

conducted by the owner or operator within 90 days after a request by the Illinois EPA. Such testing shall be conducted at the expense of the owner or operator and the owner or operator shall notify the Illinois EPA in writing 30 days in advance of conducting such testing to allow the Agency to be present during such testing.

- b. Pursuant to 35 Ill. Adm. Code 218.409(c), testing to demonstrate compliance with the VOM content limitations in 35 Ill. Adm. Code 218.407(a)(1)(A), (a)(2), (a)(3) and (a)(4)(A), and to determine the VOM content of fountain solutions, fountain solution additives, cleaning solvents, cleaning solutions, and inks (pursuant to the requirements of 35 Ill. Adm. Code 218.411(a)(1)(B), shall be conducted upon request of the Illinois EPA, as follows:
 - i. The applicable test methods and procedures specified in 35 Ill. Adm. Code 218.105(a) shall be used; provided, however, Method 24, incorporated by reference at 35 Ill. Adm. Code 218.112, shall be used to demonstrate compliance; or
 - ii. The manufacturer's specifications for VOM content for fountain solution additives, cleaning solvents, and inks may be used if such manufacturer's specifications are based on results of tests of the VOM content conducted in accordance with methods specified in 35 Ill. Adm. Code 218.105(a); provided, however, Method 24 shall be used to determine compliance.
- c. Pursuant to 35 Ill. Adm. Code 218.409(e), testing to determine the VOM composite partial vapor pressure of cleaning solvents, cleaning solvent concentrates, and as-used cleaning solutions shall be conducted in accordance with the applicable methods and procedures specified in 35 Ill. Adm. Code 218.110.
- 7a.
 - i. For a fountain solution to which VOM is not added automatically, maintain records of the VOM content of the fountain solution in accordance with Section 218.411(c)(2)(C); or
 - ii. Pursuant to 35 Ill. Adm. Code 218.410(b), the owner or operator of any lithographic printing line(s) subject to 35 Ill. Adm. Code 218.407(a)(1)(A), (a)(2) or (a)(3) shall for fountain solutions to which VOM is added at the source with automatic feed equipment, determine the VOM content of the as-applied fountain solution based on the setting of the automatic feed equipment which makes additions of VOM up to a pre-set level. The equipment used to make automatic additions must be installed, calibrated, operated and maintained in accordance with manufacturer's specifications.
- b. Pursuant to 35 Ill. Adm. Code 218.410(e):
 - i. The owner or operator of any lithographic printing line relying on the VOM content of the cleaning solution to comply with Section 218.407(a)(4)(A) of this Subpart must:

- A. For cleaning solutions that are prepared at the source with equipment that automatically mixes cleaning solvent and water (or other non-VOM):
 - 1. Install, operate, maintain, and calibrate the automatic feed equipment in accordance with manufacturer's specifications to regulate the volume of each of the cleaning solvent and water (or other non-VOM), as mixed; and
 - 2. Pre-set the automatic feed equipment so that the consumption rates of the cleaning solvent and water (or other non-VOM), as applied, comply with Section 218.407(a)(4)(A) of this Subpart;
 - B. For cleaning solutions that are not prepared at the source with automatic feed equipment, keep records of the usage of cleaning solvent and water (or other non-VOM) as set forth in Section 218.411(d)(2) of this Subpart;
- ii. The owner or operator of any lithographic printing line relying on the vapor pressure of the cleaning solution to comply with 35 Ill. Adm. Code 218.407(a)(4)(B) must keep records for such cleaning solutions used on any such line(s) as set forth in 35 Ill. Adm. Code 218.411(d)(2)(C).
- 8a. Pursuant to 40 CFR 63.10(b)(3), if an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants regulated by any standard established pursuant to section 112(d) or (f) of the Clean Air Act, and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under 40 CFR Part 63) because of limitations on the source's potential to emit or an exclusion, the owner or operator must keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) must be sufficiently detailed to allow the USEPA and/or Illinois EPA to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis must be performed in accordance with requirements established in relevant subparts of 40 CFR Part 63 for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with USEPA guidance materials published to assist sources in making applicability determinations under Section 112 of the Clean Air Act, if any. The

requirements to determine applicability of a standard under 40 CFR 63.1(b)(3) and to record the results of that determination under 40 CFR 63.10(b)(3) shall not by themselves create an obligation for the owner or operator to obtain a Title V permit.

- b. Pursuant to 35 Ill. Adm. Code 218.411(c)(2)(A), an owner or operator of a lithographic printing line subject to 35 Ill. Adm. Code 218.407(a)(1)(A), (a)(2), or (a)(3) shall collect and record the name and identification of each batch of fountain solution prepared for use on one or more lithographic printing lines for each fountain solution.
- c. Pursuant to 35 Ill. Adm. Code 218.411(d)(2), for lithographic printing line cleaning operations, an owner or operator of a lithographic printing line subject to the requirements of 35 Ill. Adm. Code 218.407 shall collect and record the following information for each cleaning solution used on each lithographic printing line:
 - i. For each cleaning solution for which the owner or operator relies on the VOM content to demonstrate compliance with Section 218.407(a)(4)(A) of this Subpart and which is prepared at the source with automatic equipment:
 - A. The name and identification of each cleaning solution;
 - B. The VOM content of each cleaning solvent in the cleaning solution, as determined in accordance with Section 218.409© of this Subpart;
 - C. Each change to setting of the automatic equipment, with date, time, description of changes in the cleaning solution constituents (e.g., cleaning solvents), and a description of changes to the proportion of cleaning solvent and water (or other non-VOM);
 - D. The proportion of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution;
 - E. The VOM content of the as-used cleaning solution, with supporting calculations; and
 - F. A calibration log for the automatic equipment, detailing periodic checks.
 - ii. For each batch of cleaning solution for which the owner or operator relies on the VOM content to demonstrate compliance with Section 218.407(a)(4)(A) of this Subpart, and which is not prepared at the source with automatic equipment:
 - A. The name and identification of each cleaning solution;
 - B. Date and time of preparation, and each subsequent modification, of the batch;

- C. The VOM content of each cleaning solvent in the cleaning solution, as determined in accordance with Section 218.409(c) of this Subpart;
 - D. The total amount of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution; and
 - E. The VOM content of the as-used cleaning solution, with supporting calculations.
- iii. For each batch of cleaning solution for which the owner or operator relies on the vapor pressure of the cleaning solution to demonstrate compliance with 35 Ill. Adm. Code 218.407(a)(4)(B):
- A. The name and identification of each cleaning solution;
 - B. Date and time of preparation, and each subsequent modification, of the batch;
 - C. The molecular weight, density, and VOM composite partial vapor pressure of each cleaning solvent, as determined in accordance with 35 Ill. Adm. Code 218.409(e);
 - D. The total amount of each cleaning solvent used to prepare the as-used cleaning solution; and
 - E. The VOM composite partial vapor pressure of each as-used cleaning solution, as determined in accordance with 35 Ill. Adm. Code 218.409(e).
- iv. The date, time and duration of scheduled inspections performed to confirm the proper use of closed containers to control VOM emissions, and any instances of improper use of closed containers, with descriptions of actual practice and corrective action taken, if any.
- d. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:
- i. VOM contents of inks, cleaning solutions, coatings and other VOM containing materials (% by weight);
 - ii. Monthly and annual usages of inks, cleaning solutions, fountain solutions and other VOM containing materials (lb/month and tons/year);
 - iii. HAP content of the materials used (% by weight);
 - iv. Natural gas usage (mmscf/month and mmscf/year); and

- v. Monthly and annual CO, NO_x, PM, SO₂, VOM, and HAP emissions with supporting calculations (tons/month and tons/year). If credit is desired for VOM and HAP emissions from materials purchased but not consumed or from waste materials, records of materials disposed of recycled (both quantity and VOM/HAP content) shall be maintained on a monthly basis.

- e. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five (5) years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.

- 9a. If there is an exceedance of or deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance/deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or deviation and efforts to reduce emissions and future occurrences.

- b. Pursuant to 35 Ill. Adm. Code 218.411(c) and 218.411(d), an owner or operator or a lithographic printing line subject to the requirements of 35 Ill. Adm. Code 218.407 shall:
 - i. Notify the Illinois EPA in writing of any violation of 35 Ill. Adm. Code 218.407 within 30 days after the occurrence of such violation. Such notification shall include a copy of all records of such violation; and
 - ii. If changing its method of demonstrating compliance with the applicable VOM content limitations in 35 Ill. Adm. Code 218.407 or changing the method of demonstrating compliance with the VOM content limitations for fountain solutions pursuant to 35 Ill. Adm. Code 218.409, certify compliance for such new method in accordance with 35 Ill. Adm. Code 218.411(c)(1), within 30 days after making such change, and perform all tests and calculations necessary to demonstrate that such printing line(s) will be in compliance with the applicable requirements of 35 Ill. Adm. Code 218.407(a).
 - iii. If changing its method of demonstrating compliance with the requirements of 35 Ill. Adm. Code 218.407(a)(4), or changing between automatic and manual methods of preparing cleaning solutions, certify compliance for such new method in accordance with 35 Ill. Adm. Code 218.411(d)(1), within 30 days after making such change, and perform all tests and calculations necessary to demonstrate that such printing line(s) will be in compliance with the applicable requirements of 35 Ill. Adm. Code 218.407(a)(4).

10. Two (2) copies of required reports and notifications shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

If you have any questions on this, please call David Hulskotter at 217/782-2113.

Edwin C. Bakowski, P.E.
Acting Manager, Permit Section
Division of Air Pollution Control

ECB:DWH:psj

cc: Illinois EPA, FOS Region 1
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from the printing plant operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions are well below the levels, (e.g., 100 tons per year of VOM, 10 tons per year for a single HAP, and 25 tons per year for totaled HAPs) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled, and control measures are more effective than required in this permit.

<u>Emission Unit</u>	E M I S S I O N S (Tons/Year)					Single	Total
	<u>CO</u>	<u>NO_x</u>	<u>PM</u>	<u>SO₂</u>	<u>VOM</u>	<u>HAP</u>	<u>HAPs</u>
Non-Heatset Offset Printing Presses, Duplicators, Roll Feed Digital Color Printers and Inkjet Printers	---	---	---	---	24.50		
Fuel Combustion	<u>3.02</u>	<u>3.60</u>	<u>0.27</u>	<u>0.02</u>	<u>0.20</u>		
Totals	<u>3.02</u>	<u>3.60</u>	<u>0.27</u>	<u>0.02</u>	<u>24.70</u>	< 10	< 25

DWH:04070001:psj