

217/785-1705

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT--REVISED

PERMITTEE

Quantum Color Graphics  
Attn: Ray Barrett, CFO  
6511 West Oakton Street  
Morton Grove, Illinois 60053

Application No.: 04060056

I.D. No.: 031195ADH

Applicant's Designation:

Date Received: July 29, 2011

Subject: Lithographic Printing Presses

Date Issued: October 27, 2011

Expiration Date: July 6, 2016

Location: 6511 West Oakton Street, Morton Grove, Cook County

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of three (3) coldset sheetfed lithographic printing presses (Press #2, Press #4, and Press #5) each with an aqueous coater and one (1) digital printing press, 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 any single Hazardous Air Pollutant (HAP) and 25 tons/year of any combination of such HAPs). As a result, the source is excluded from the requirements 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 requirements of 35 Ill. Adm. Code Part 205, Emissions Reduction Market System. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
  - iii. To limit the emissions of VOM from the construction of new emission units and other modifications at the source, which occurred without first obtaining construction permit(s) between November 15, 1992 and June 15, 2005 (the period during which the Chicago area was classified as severe nonattainment for ozone), to less than 25 tons/year. As a result, the source is excluded from the requirements of 35 Ill. Adm. Code Part 203, Major Stationary Sources Construction and Modification.
- b. Prior to initial 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 212.123(a), no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 Ill. Adm. Code 212.122.
- b. Pursuant to 35 Ill. Adm. Code 212.123(b), the emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emissions permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) radius from the center point of any other such emission unit owned or operated by such person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in any 24 hour period.
- c. Pursuant to 35 Ill. Adm. Code 212.301, no person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the emission zenith at a point beyond the property line of the source.
- 3a. Pursuant to 35 Ill. Adm. Code 218.204(c), except as provided in 35 Ill. Adm. Code 218.205, 218.207, 218.208, 218.212, 218.215 and 218.216, no owner or operator of a coating line shall apply at any time any coating in which the VOM content exceeds the following emission limitations for Paper Coating. Except as otherwise provided in 35 Ill. Adm. Code 218.204(a), (c), (g), (h), (j), (l), (n), (p), and (q), compliance with emission limitations not marked with an asterisk is required until March 15, 1996. The following emission limitations are expressed in units of VOM per volume of coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied at each coating applicator, except where noted. Compounds which are specifically exempted from the definition of VOM should be treated as water for the purpose of calculating the "less water" part of the coating composition. Compliance with 35 Ill. Adm. Code 218 Subpart F must be demonstrated through the applicable coating analysis test methods and procedures specified in 35 Ill. Adm. Code 218.105(a) and the recordkeeping and reporting requirements specified in 35 Ill. Adm. Code 218.211(c) except where noted. (Note: The equation presented in 35 Ill. Adm. Code 218.206 shall be used to calculate emission limitations for determining compliance by add on controls, credits for transfer efficiency, emissions trades and cross line averaging.) The emission limitations are as follows:

i. Prior to May 1, 2011:

kg/l	lb/gal
0.28	(2.3)

ii. On and after May 1, 2011:

kg VOM/kg (lb VOM/lb) solids applied	kg VOM/kg (lb VOM/lb) coatings applied
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- |   |      |         |
|---|------|---------|
| A. Pressure sensitive tape and label surface coatings | 0.20 | (0.067) |
| B. All other paper coatings                           | 0.40 | (0.08)  |

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, or 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.

c. Pursuant to 35 Ill. Adm. Code 218.407(a), no owner or operator of lithographic printing lines subject to the requirements of 35 Ill. Adm. Code Part 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 weight; or
- B. The VOM content of the as-applied fountain solution is 8.5 percent or less, by weight, 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:
  - I. 30 percent, by weight; or
  - II. On and after August 1, 2010, for owners or operators of sources that meet the applicability criteria in 35 Ill. Adm. Code 218.405(c)(3) and do not certify pursuant to 35 Ill. Adm. Code 218.411(g)(1)(B) that the source will not make use of any of the exclusions in 35 Ill. Adm. Code 218.405(c)(3), 70 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).

4. This permit is issued based on the source not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Paper and Other Web Coating, 40 CFR 63 Subpart JJJJ. Pursuant to 40 CFR 63.3300(c), web coating lines in lithography, screen-printing, letterpress, and narrow-web flexographic printing processes are not part of the affected source of 40 CFR 63 Subpart JJJJ.
5. Pursuant to 35 Ill. Adm. Code 212.314, 35 Ill. Adm. Code 212.301 shall not apply and spraying pursuant to 35 Ill. Adm. Code 212.304 through 212.310 and 35 Ill. Adm. Code 212.312 shall not be required when the wind speed is greater than 40.2 km/hour (25 mph). Determination of wind speed for the purposes of this rule shall be by a one-hour average or hourly recorded value at the nearest official station of the U.S. Weather Bureau or by wind speed instruments operated on the site. In cases where the duration of operations subject to this rule is less than one hour, wind speed may be averaged over the duration of the operations on the basis of on-site wind speed instrument measurements.
- 6a. This permit is issued based on the coldset sheetfed lithographic printing presses and the aqueous coaters not being subject to 35 Ill. Adm. Code 218.187 (Other Industrial Solvent Cleaning Operations). Pursuant to 35 Ill. Adm. Code 218.187(a)(2)(B), notwithstanding 35 Ill. Adm. Code 218.187(a)(1) cleaning operations for emission units within the following source categories shall be exempt from the requirements of 35 Ill. Adm. Code 218.187(b), (c), (d), (e), (f), and (g).
  - i. Lithographic printing;
  - ii. Paper, film, and foil coating;
- b. This permit is issued based on the digital printing press not being subject to 35 Ill. Adm. Code 218.204(c) (Paper Coating). The paper coating limitation set forth in 35 Ill. Adm. Code 218.204(c) shall not apply to any owner or operator of any paper coating line on which flexographic or rotogravure printing is performed if the paper coating line complies with the emissions limitations in 35 Ill. Adm. Code 218.401. In addition, screen printing on paper is not regulated as paper coating, but is regulated under 35 Ill. Adm. Code 218 Subpart TT. On and after May 1, 2011, the paper coating limitation shall also not apply to coating performed on or in-line with any digital printing press, or to size presses and on-machine coaters on papermaking machines applying sizing or water-based clays.
- c. This permit is issue based on the coldset sheetfed lithographic printing presses and the digital printing press not being subject to 35 Ill. Adm. Code 218.204(c) (Paper Coating). The paper coating limitation set forth in 35 Ill. Adm. Code 218.204(c) shall not apply to any owner or operator of any paper coating line on which flexographic or rotogravure printing is performed if the paper coating line complies with the emissions limitations in 35 Ill. Adm. Code 218.401. In addition, screen printing on paper is not regulated as paper coating, but is regulated under 35 Ill. Adm. Code 218 Subpart TT. On and after May 1, 2011, the paper coating limitation shall also not apply to coating performed on or in-line with any digital printing press, or to

size presses and on-machine coaters on papermaking machines applying sizing or water-based clays.

- d. Pursuant to 35 Ill. Adm. Code 218.209, no owner or operator of a coating line subject to the limitations of 35 Ill. Adm. Code 218.204 is required to meet the limitations of 35 Ill. Adm. Code 218 Subpart G (35 Ill. Adm. Code 218.301 or 218.302), after the date by which the coating line is required to meet 35 Ill. Adm. Code 218.204.
- e. Pursuant to 35 Ill. Adm. Code 218.405(c)(3), notwithstanding 35 Ill. Adm. Code 218.405(c)(2), at sources where the combined emissions of VOM from all lithographic printing lines at the source (including solvents used for cleanup operations associated with the lithographic printing lines) equal or exceed 6.8 kg/day (15 lbs/day) but do not exceed 45.5 kg/day (100 lbs/day), calculated in accordance with 35 Ill. Adm. Code 218.411(b)(1)(B), before the application of capture systems and control devices, the following exclusions shall apply unless the owner or operator of the source certifies pursuant to 35 Ill. Adm. Code 218.411(g)(1)(B) that the source will not make use of any such exclusions:
  - i. The requirements of 35 Ill. Adm. Code 218.407(a)(1)(A), (a)(2), and (a)(3) shall not apply to lithographic printing lines with a total fountain solution reservoir of less than 3.8 liters (1 gallon);
  - ii. The requirements of 35 Ill. Adm. Code 218.407(a)(3) shall not apply to sheet-fed offset lithographic printing lines with maximum sheet size of 11 x 17 inches or smaller;
  - iii. The requirements of 35 Ill. Adm. Code 218.407(a)(4) shall not apply to up to a total of 416.3 liters (110 gallons) per year of cleaning materials used on all lithographic printing lines at the source;
  - iv. The requirements of 35 Ill. Adm. Code 218.407(a)(4)(A)(i) shall not apply to lithographic printing lines at the source. Instead, the requirements of 35 Ill. Adm. Code 218.407(a)(4)(A)(ii) shall apply to such lines.
- f. This permit is issued based on the digital printing press not being subject to control requirements 35 Ill. Adm. Code Part 218 Subpart TT (Other Emission Units). This is a result of the federally enforceable production and operating limitations, which restrict the potential to emit for VOM from all emission units not subject to 35 Ill. Adm. Code 218 Subparts F and H at this source to less than 25 tons per year so that the source is not subject to the requirements of these rules.
- 7a. Pursuant to 35 Ill. Adm. Code 218.187(d), the owner or operator of a source subject to the requirements of 35 Ill. Adm. Code 218.187 shall comply with the following for each subject cleaning operation. Such requirements are in addition to work practices set forth in 35 Ill. Adm. Code 218.187(b)(4) and (b)(5), as applicable:

- i. Cover open containers and properly cover and store applicators used to apply cleaning solvents;
  - ii. Minimize air circulation around the cleaning operation;
  - iii. Dispose of all used cleaning solutions, cleaning towels, and applicators used to apply cleaning solvents in closed containers;
  - iv. Utilize equipment practices that minimize emissions;
  - v. When using cleaning solvent for wipe cleaning, sources that manufacture coatings, inks, adhesives, or resins shall:
    - A. Cover open containers used for the storage of spent or fresh organic compounds used for cleanup or coating, ink, adhesive, or resin removal; and
    - B. Cover open containers used for the storage or disposal of cloth or paper impregnated with organic compounds that are used for cleanup or coating, ink, adhesive, or resin removal.
- b. Pursuant to 35 Ill. Adm. Code 218.218(a), on and after May 1, 2011, every owner or operator of a source subject to the requirements of 35 Ill. Adm. Code 218.204(c) shall:
- i. Store all VOM-containing cleaning materials in closed containers;
  - ii. Ensure that mixing and storage containers used for VOM-containing materials are kept closed at all times except when depositing or removing those materials;
  - iii. Minimize spills of VOM-containing cleaning materials;
  - iv. Convey VOM-containing cleaning materials from one location to another in closed containers or pipes; and
  - v. Minimize VOM emissions from the cleaning of storage, mixing, and conveying equipment.
- c. Pursuant to 35 Ill. Adm. Code 218.407(a)(5), no owner or operator of lithographic printing lines subject to the requirements of 35 Ill. Adm. Code 218 Subpart H shall 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.
- 8a. Pursuant to 35 Ill. Adm. Code 212.306, all normal traffic pattern access areas surrounding storage piles specified in 35 Ill. Adm. Code 212.304 and all normal traffic pattern roads and parking facilities which are located on mining or manufacturing property shall be paved or treated with water, oils or chemical dust suppressants. All paved areas shall be cleaned on a regular basis. All areas treated with water, oils or chemical dust suppressants shall have the treatment

applied on a regular basis, as needed, in accordance with the operating program required by 35 Ill. Adm. Code 212.309, 212.310 and 212.312.

- b. Pursuant to 35 Ill. Adm. Code 212.309(a), the emission units described in 35 Ill. Adm. Code 212.304 through 212.308 and 35 Ill. Adm. Code 212.316 shall be operated under the provisions of an operating program, consistent with the requirements set forth in 35 Ill. Adm. Code 212.310 and 212.312, and prepared by the owner or operator and submitted to the Illinois EPA for its review. Such operating program shall be designed to significantly reduce fugitive particulate matter emissions.
- c. Pursuant to 35 Ill. Adm. Code 212.310, as a minimum the operating program shall include the following:
  - i. The name and address of the source;
  - ii. The name and address of the owner or operator responsible for execution of the operating program;
  - iii. A map or diagram of the source showing approximate locations of storage piles, conveyor loading operations, normal traffic pattern access areas surrounding storage piles and all normal traffic patterns within the source;
  - iv. Location of unloading and transporting operations with pollution control equipment;
  - v. A detailed description of the best management practices utilized to achieve compliance with 35 Ill. Adm. Code 212 Subpart K, including an engineering specification of particulate collection equipment, application systems for water, oil, chemicals and dust suppressants utilized and equivalent methods utilized;
  - vi. Estimated frequency of application of dust suppressants by location of materials; and
  - vii. Such other information as may be necessary to facilitate the Illinois EPA's review of the operating program.
- d. Pursuant to 35 Ill. Adm. Code 212.312, the operating program shall be amended from time to time by the owner or operator so that the operating program is current. Such amendments shall be consistent with 35 Ill. Adm. Code 212 Subpart K and shall be submitted to the Illinois EPA for its review.
- 9. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the odor nuisance.
- 10a. Emissions and operation from the non-heatset sheetfed lithographic printing presses #2, #4 and #5 shall not exceed the following limits:

<u>Material</u>	<u>VOM Usage</u>		<u>VOM Emissions</u>	
	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>
Inks	5.00	50.00	0.25	2.50
Fountain Solution	0.40	4.00	0.40	4.00
Coatings	0.30	3.00	0.30	3.00
Solvents (Cleanup, etc.)	0.70	7.00	0.70	7.00
			Totals	16.5

These limits are based on the maximum material usage, material balance and 95% retention of coldset ink. The above limitations are being established in this permit pursuant to Title I of the Clean Air Act, specifically 35 Ill. Adm. Code Part 203, Major Stationary Sources Construction and Modification. The source has requested that the Illinois EPA establish emission limitations and other appropriate terms and conditions in this permit that limit the VOM emissions from non-heatset sheetfed lithographic printing presses #2, #4 and #5 below the levels that would trigger the applicability of these rules.

- b. Operation of and emissions from the digital printing press shall not exceed the following limits:

<u>VOM Usage</u>		<u>VOM Emissions</u>	
<u>(Tons/Month)</u>	<u>(Tons/Year)</u>	<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
0.04	0.40	0.04	0.40

These limits are based on maximum material usage and material balance.

- c. The emissions of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act from the source shall not exceed 0.79 tons/month and 7.90 tons/year of any single HAP and 1.60 tons/month and 16.00 tons/year of any combination of such HAPs. 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.
- d. The VOM and HAP emissions shall be calculated using the emission factors and formulas listed below:
- i. For manual cleaning solution used that has a VOM composite partial vapor pressure less than 10 mmHg at 20°C a 50% retention factor of the cleaning solution used may be presumed as stated in USEPA's Control Techniques Guidelines for Offset Lithographic Printing and Letterpress Printing (EPA 453/R-06-002, September 2006).
  - ii. VOM or HAP Emissions from Manual Cleaning Solution = Manual Cleaning Solution Usage (lb) x VOM or HAP Content(Percent) x 0.5.  
Note: For materials meeting Condition 10(c)(i) above.
  - iii. VOM or HAP Emissions from Coldset Lithographic Ink = VOM or HAP Usage (lb) x (0.05).

- iv. 
$$\text{VOM or HAP Emissions from Other Materials} = \text{Material Usage (lb)} \times \text{VOM or HAP Content(percent)}.$$
- d. 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).
- 11a. Pursuant to 35 Ill. Adm. Code 201.282, every emission source of air pollution control equipment shall be subject to the following testing requirements for the purpose of determining the nature and quantities of specified air contaminant emissions and for the purpose of determining ground level and ambient air concentrations of such air contaminants:
  - i. Testing by Owner or Operator. The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. The Illinois EPA may adopt procedures detailing methods of testing and formats for reporting results of testing. Such procedures and revisions thereto, shall not become effective until filed with the Secretary of State, as required by the APA Act. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests.
  - ii. Testing by the Illinois EPA. The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary.
- b. Testing required by Condition 12 shall be performed upon a written request from the Illinois EPA by a qualified testing service.
- 12a. Pursuant to 35 Ill. Adm. Code 218.211(a), the VOM content of each coating and the efficiency of each capture system and control device shall be determined by the applicable test methods and procedures specified in 35 Ill. Adm. Code 218.105 to establish the records required under 35 Ill. Adm. Code 218.211.
  - b. Pursuant to 35 Ill. Adm. Code 218.409(a), testing to demonstrate compliance with 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, or as otherwise specified in 35 Ill. Adm. Code 218 Subpart H. 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 Illinois EPA to be present during such testing.

- c. 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), (b)(1)(B), or (b)(2)(B), as applicable), shall be conducted upon request of the Illinois EPA or as otherwise specified in 35 Ill. Adm. Code 218 Subpart H, 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, 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.
  - d. 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. 218.110.
- 13a. Pursuant to 35 Ill. Adm. Code 218.410(a), Fountain Solution Temperature:
- i. The owner or operator of any lithographic printing lines relying on the temperature of the fountain solution to demonstrate compliance shall install, maintain, and continuously operate a temperature monitor of the fountain solution in the reservoir or fountain tray, as applicable.
  - ii. The temperature monitor must be capable of reading with an accuracy of 1°C or 2°C, and must be attached to an automatic, continuous recording device such as a strip chart, recorder, or computer, with at least the same accuracy, that is installed, calibrated and maintained in accordance with the manufacturer's specifications. If the automatic, continuous recording device malfunctions, the owner or operator shall record the temperature of the fountain solution at least once every two operating hours. The automatic, continuous recording device shall be repaired or replaced as soon as practicable.
- b. Pursuant to 35 Ill. Adm. Code 218.410(b), Fountain Solution VOM Content. The owner or operator of any lithographic printing lines subject to 35 Ill. Adm. Code 218.407(a)(1)(A), (a)(2) or (a)(3) shall:

- i. For a fountain solution to which VOM is not added automatically:
  - A. Maintain records of the VOM content of the fountain solution in accordance with 35 Ill. Adm. Code 218.411(c)(2)(C); or
  - B. Take a sample of the as-applied fountain solution from the fountain tray or reservoir, as applicable, each time a fresh batch of fountain solution is prepared or each time VOM is added to an existing batch of fountain solution in the fountain tray or reservoir, and shall determine compliance with the VOM content limitation of the as-applied fountain solution by using one of the following options:
    - I. With a refractometer or hydrometer with a visual, analog, or digital readout and with an accuracy of 0.5 percent. The refractometer or hydrometer must be calibrated with a standard solution for the type of VOM used in the fountain solution, in accordance with manufacturer's specifications, against measurements performed to determine compliance. The refractometer or hydrometer must be corrected for temperature at least once per 8-hour shift or once per batch of fountain solution prepared or modified, whichever is longer; or
    - II. With a conductivity meter if it is demonstrated that a refractometer and hydrometer cannot distinguish between compliant and noncompliant fountain solution for the type and amount of VOM in the fountain solution. A source may use a conductivity meter if it demonstrates that both hydrometers and refractometers fail to provide significantly different measurements for standard solutions containing 95 percent, 100 percent and 105 percent of the applicable VOM content limit. The conductivity meter reading for the fountain solution must be referenced to the conductivity of the incoming water. A standard solution shall be used to calibrate the conductivity meter for the type of VOM used in the fountain solution, in accordance with manufacturer's specifications;
- ii. 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. Records must be retained of the VOM content of the fountain solution in accordance with 35 Ill. Adm. Code 218.411(c)(2)(D). The equipment used to make automatic additions must be installed, calibrated, operated, and maintained in accordance with manufacturer's specifications.

- c. Pursuant to 35 Ill. Adm. Code 218.410(e), Cleaning Solution:
  - i. The owner or operator of any lithographic printing line relying on the VOM content of the cleaning solution to comply with 35 Ill. Adm. Code 218.407(a)(4)(A) must:
    - A. For cleaning solutions that are prepared at the source with equipment that automatically mixes cleaning solvent and water (or other non-VOM):
      - I. 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
      - II. 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 35 Ill. Adm. Code 218.407(a)(4)(A).
    - 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 35 Ill. Adm. Code 218.411(f)(2).
  - 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 lines as set forth in 35 Ill. Adm. Code 218.411(f)(2)(C).
- 14. 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.

- 15a. Pursuant to 35 Ill. Adm. Code 218.211(c)(2), any owner or operator of a coating line subject to the limitations of 35 Ill. Adm. Code 218.204 other than 35 Ill. Adm. Code 218.204(a)(1)(B), (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(D) and complying by means of 35 Ill. Adm. Code 218.204 shall collect and record all of the following information each day for each coating line and maintain the information at the source for a period of three years:
- i. The name and identification number of each coating as applied on each coating line.
  - ii. The weight of VOM per volume and the volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each coating line;
- b. Pursuant to 35 Ill. Adm. Code 218.411(e)(2), 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 following information for each fountain solution:
- i. The name and identification of each batch of fountain solution prepared for use on one or more lithographic printing lines, the lithographic printing lines or centralized reservoir using such batch of fountain solution, and the applicable VOM content limitation for the batch;
  - ii. If an owner or operator uses a hydrometer, refractometer, or conductivity meter, pursuant to 35 Ill. Adm. Code 218.410(b)(1)(B), to demonstrate compliance with the applicable VOM content limit in 35 Ill. Adm. Code 218.407(a)(1)(A), (a)(2), or (a)(3):
    - A. The date and time of preparation and each subsequent modification of the batch;
    - B. The results of each measurement taken in accordance with 35 Ill. Adm. Code 218.410(b);
    - C. Documentation of the periodic calibration of the meter in accordance with the manufacturer's specifications, including date and time of calibration, personnel conducting, identity of standard solution, and resultant reading; and

- D. Documentation of the periodic temperature adjustment of the meter, including date and time of adjustment, personnel conducting and results.
- iii. If the VOM content of the fountain solution is determined pursuant to 35 Ill. Adm. Code 218.410(b)(1)(A), for each batch of as-applied fountain solution:
- A. Date and time of preparation and each subsequent modification of the batch;
  - B. Volume or weight, as applicable, and VOM content of each component used in, or subsequently added to, the fountain solution batch;
  - C. Calculated VOM content of the as-applied fountain solution; and
  - D. Any other information necessary to demonstrate compliance with the applicable VOM content limits in 35 Ill. Adm. Code 218.407(a)(1)(A), (a)(2) and (a)(3).
- iv. If the VOM content of the fountain solution is determined pursuant to 35 Ill. Adm. Code 218.410(b)(2), for each setting:
- A. VOM content limit corresponding to each setting;
  - B. Date and time of initial setting and each subsequent setting;
  - C. Documentation of the periodic calibration of the automatic feed equipment in accordance with the manufacturer's specifications; and
  - D. Any other information necessary to demonstrate compliance with the applicable VOM content limits in 35 Ill. Adm. Code 218.407(a)(1)(A), (a)(2) and (a)(3).
- v. If the owner or operator relies on the temperature of the fountain solution to comply with the requirements in 35 Ill. Adm. Code 218.407(a)(1)(A)(ii) or (a)(3)(B):
- A. The temperature of the fountain solution at each printing line, as monitored in accordance with 35 Ill. Adm. Code 218.410(a); and
  - B. A maintenance log for the temperature monitoring devices and automatic, continuous temperature recorders detailing all routine and non-routine maintenance performed, including dates and duration of any outages.
- c. Pursuant to 35 Ill. Adm. Code 218.411(f)(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 35 Ill. Adm. Code 218.407(a)(4)(A) 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 35 Ill. Adm. Code 218.409(c);
  - C. Each change to the 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 35 Ill. Adm. Code 218.407(a)(4)(A), 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 35 Ill. Adm. Code 218.409(c);
  - 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. For cleaning solutions that are used as purchased, the manufacturer's specifications for VOM content 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);

- 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). For cleaning solutions that are used as purchased, the manufacturer's specifications for VOM composite partial vapor pressure may be used if such manufacturer's specifications are based on results of tests conducted in accordance with methods specified in 35 Ill. Adm. Code 218.105(a) and 218.110;
  - 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). For cleaning solutions that are used as purchased, the manufacturer's specifications for VOM composite partial vapor pressure may be used if such manufacturer's specifications are based on results of tests conducted in accordance with methods specified in 35 Ill. Adm. Code 218.105(a) and 218.110;
- 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.
- e. Pursuant to 35 Ill. Adm. Code 218.411(g)(2)(A), the owner or operator of lithographic printing lines subject to one or more of the exclusions set forth in 35 Ill. Adm. Code 218.405(c)(3) shall, unless the source has certified in accordance with 35 Ill. Adm. Code 218.411(g)(1)(B) that it will not make use of any of the exclusions set forth in 35 Ill. Adm. Code 218.405(c)(3), collect and record the following information for all lithographic printing lines at the source:
  - i. Calculations that demonstrate that combined emissions of VOM from all lithographic printing lines (including inks, fountain solutions, and solvents used for cleanup operations associated with the lithographic printing lines) at the source never exceed 45.5 kg/day (100 lbs/day) before the use of capture systems and control devices, determined in accordance with the calculations in 35 Ill. Adm. Code 218.411(b)(2)(B);
  - ii. The amount of cleaning materials used on lithographic printing

lines at the source that does not comply with the cleaning material limitations in 35 Ill. Adm. Code 218.407(a)(4);

- f. Pursuant to 35 Ill. Adm. Code 218.411(h), the owner or operator shall maintain all records required by 35 Ill. Adm. Code 218.411 at the source for a minimum period of three years and shall make all records available to the Illinois EPA upon request.
- 16a. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:
- i. Monthly and annual usage of the inks, coatings, fountain solutions and solvents (tons/month and tons/year);
  - ii. VOM and HAP contents of the materials used (weight percent);
  - iii. Density of materials (lbs/gallons); and
  - iv. Monthly and annual VOM and HAP emissions from the source with supporting calculations (tons/month and tons/year).
- b. 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 storage device) 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.
- 17a. Pursuant to 35 Ill. Adm. Code 218.187(e)(9), all sources subject to the requirements of 35 Ill. Adm. Code 218.187(b) and (d) shall notify the Illinois EPA of any violation of 35 Ill. Adm. Code 218.187(b) or (d) by providing a description of the violation and copies of records documenting the violation to the Illinois EPA within 30 days following the occurrence of the violation;
- b. Pursuant to 35 Ill. Adm. Code 218.211(c), any owner or operator of a coating line subject to the limitations of 35 Ill. Adm. Code 218.204 other than 35 Ill. Adm. Code 218.204(a)(1)(B), (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(D) and complying by means of 35 Ill. Adm. Code 218.204 shall comply with the following:
- i. By a date consistent with 35 Ill. Adm. Code 218.106, or upon initial start-up of a new coating line, or upon changing the method of compliance from an existing subject coating line from 35 Ill. Adm. Code 218.205, 35 Ill. Adm. Code 218.207, 35 Ill. Adm. Code 218.215, or 35 Ill. Adm. Code 218.216 to 35 Ill. Adm. Code 218.204; the owner or operator of a subject coating line shall certify to the Illinois EPA that the coating line will be in compliance with 35 Ill. Adm. Code 218.204 on and after a date consistent with 35 Ill. Adm. Code 218.106, or on and after the initial start-up date. The certification shall include:

- A. The name and identification number of each coating as applied on each coating line;
  - B. The weight of VOM per volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each coating line;
  - C. For coating lines subject to the limitations of 35 Ill. Adm. Code 218.204(c)(2), the weight of VOM per weight of solids (or the weight of VOM per weight of coatings, as applicable) in each coating as applied each day on each coating line
- ii. On and after a date consistent with 35 Ill. Adm. Code 218.106, the owner or operator of a subject coating line shall notify the Illinois EPA in the following instances:
- A. Any record showing violation of 35 Ill. Adm. Code 218.204 shall be reported by sending a copy of such record to the Illinois EPA within 30 days following the occurrence of the violation.
  - B. At least 30 calendar days before changing the method of compliance from 35 Ill. Adm. Code 218.204 to 35 Ill. Adm. Code 218.205 or 35 Ill. Adm. Code 218.207, the owner or operator shall comply with all requirements of 35 Ill. Adm. Code 218.211(d)(1) or (e)(1), respectively. Upon changing the method of compliance from 35 Ill. Adm. Code 218.204 to 35 Ill. Adm. Code 218.205 or 35 Ill. Adm. Code 218.207, the owner or operator shall comply with all requirements of 35 Ill. Adm. Code 218.211(d) or (e), respectively.
- c. Pursuant to 35 Ill. Adm. Code 218.411(e), 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:
- i. By August 1, 2010, and upon initial start-up of a new lithographic printing line, certify to the Illinois EPA that fountain solutions used on each lithographic printing line will be in compliance with the applicable VOM content limitation. Such certification shall include:
    - A. Identification of each lithographic printing line at the source, by type, e.g., heatset web offset, non-heatset web offset, or sheet-fed offset;
    - B. Identification of each centralized fountain solution reservoir and each lithographic printing line that it serves;
    - C. A statement that the fountain solution will comply with the VOM content limitations in 35 Ill. Adm. Code 218.407(a)(1)(A), (a)(2), or (a)(3), as applicable;

- D. Initial documentation that each type of fountain solution will comply with the applicable VOM content limitations, including copies of manufacturer's specifications, test results, if any, formulation data and calculations;
  - E. Identification of the methods that will be used to demonstrate continuing compliance with the applicable limitation, e.g., a refractometer, hydrometer, conductivity meter, or recordkeeping procedures with detailed description of the compliance methodology; and
  - F. A sample of the records that will be kept pursuant to 35 Ill. Adm. Code 218.411(e)(2).
- ii. 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.
- d. Pursuant to 35 Ill. Adm. Code 218.411(f), 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:
- i. By August 1, 2010, and upon initial start-up of a new lithographic printing line, certify to the Illinois EPA that all cleaning solutions, other than those excluded pursuant to 35 Ill. Adm. Code 218.405(c)(3)(C), and the handling of all cleaning materials, will be in compliance with the requirements of 35 Ill. Adm. Code 218.407(a)(4)(A) or (a)(4)(B) and (a)(5), and such certification shall also include:
    - A. A statement that the cleaning solution will comply with the limitations in 35 Ill. Adm. Code 218.407(a)(4);
    - B. Identification of the methods that will be used to demonstrate continuing compliance with the applicable limitations;
    - C. A sample of the records that will be kept pursuant to 35 Ill. Adm. Code 218.411(f)(2); and
    - D. A description of the practices that ensure that VOM-containing cleaning materials are kept in closed containers;
  - ii. 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.
- e. Pursuant to 35 Ill. Adm. Code 218.411(g), the owner or operator of lithographic printing lines subject to one or more of the exclusions

set forth in 35 Ill. Adm. Code 218.405(c)(3) shall:

- i. By August 1, 2010, or upon initial start-up of a new lithographic printing line that is subject to one or more of the exclusions set forth in 35 Ill. Adm. Code 218.405(c)(3), whichever is later, submit a certification to the Illinois EPA that includes either:
    - A. A declaration that the source is subject to one or more of the exclusions set forth in 35 Ill. Adm. Code 218.405(c)(3) and a statement indicating which such exclusions apply to the source; or
    - B. A declaration that the source will not make use of any of the exclusions set forth in 35 Ill. Adm. Code 218.405(c)(3);
  - ii. If changing from utilization of the exclusions set forth in 35 Ill. Adm. Code 218.405(c)(3) to opting out of such exclusions pursuant to 35 Ill. Adm. Code 218.411(g)(1)(B), or if there is a change at the source such that the exclusions no longer apply, certify compliance in accordance with 35 Ill. Adm. Code 218.411(g)(1)(B) within 30 days after making such change, and perform all tests and calculations necessary to demonstrate that such printing lines will be in compliance with the applicable requirements of 35 Ill. Adm. Code 218.407;
  - iii. If changing from opting out of the exclusions set forth in 35 Ill. Adm. Code 218.405(c)(3) pursuant to 35 Ill. Adm. Code 218.411(g)(1)(B) to utilization of such exclusions, certify compliance in accordance with 35 Ill. Adm. Code 218.411(g)(1)(A) within 30 days after making such change.
- f. Pursuant to 35 Ill. Adm. Code 218.990, upon request by the Illinois EPA, the owner or operator of an emission unit which is exempt from the requirements of 35 Ill. Adm. Code 218 Subparts PP, QQ, RR, TT or 35 Ill. Adm. Code 218.208(b) shall submit records to the Illinois EPA within 30 calendar days from the date of the request that document that the emission unit is exempt from those requirements.
- 18a. If there is an exceedance of or a 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 or 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. 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

It should be noted this permit has been revised to include the equipment described in construction permit 11070054.

If you have any questions on this, please call David Hulskotter at 217/785-1705.

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

Date Signed: \_\_\_\_\_

ECB:DWH:jws

cc: Illinois EPA, FOS Region 1  
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from the source 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 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)		
	<u>VOM</u>	Single <u>HAP</u>	Combined <u>HAPs</u>
Digital Press	0.40		
Sheetfed Lithographic Printing Presses #2, #4 and #5	<u>16.50</u>	<u>7.90</u>	<u>16.0</u>
Totals	<u>16.90</u>	<u>7.90</u>	<u>16.0</u>