217/782-2113

CONSTRUCTION PERMIT –- NESHAP SOURCE -- REVISED

PERMITTEE

Prairie State Group, Inc.
Attn: Dan Doherty
11100 Addison Avenue
Franklin Park, Illinois 60131

Application No.: 06070040 I.D. No.: 031096AOB
Applicant's Designation: Press W-10 Date Received: September 4, 2007
Subject: Printing
Date Issued: April 23, 2008
Location: 11100 Addison Avenue, Franklin Park, Cook County, 60131

This permit is hereby granted to the above-designated Permittee to CONSTRUCT emission unit(s) and/or air pollution control equipment consisting of thermal oxidizer (TO), two flexographic printing presses (Presses No. 9 and 10), and modify the emission limits of existing printing presses pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. Operation of the equipment listed above is allowed under this permit, until final action is taken on the Federally Enforceable State Operating Permit (FESOP) application for this source.

2a. This permit is issued based on the construction of the flexographic printing presses (Press No. 9 and W-10), the thermal oxidizer, and modification of emission limits of existing printing presses not constituting a new major source or major modification pursuant to Title I of the Clean Air Act, specifically the Illinois EPA rules for Major Stationary Sources Construction and Modification, 35 Ill. Adm. Code Part 203. The source has requested that the Illinois EPA establish emission limitations and other appropriate terms and conditions in this permit that limit the volatile organic material (VOM) emissions from the above-listed equipment below the levels that would trigger the applicability of these rules.

b. This permit is also issued 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.

c. Prior to issuance, a draft of this permit has undergone a public notice and comment period.

3a. 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 the requirements of 35 Ill. Adm. Code 212.122, pursuant to 35 Ill. Adm. Code 212.123(a), except as allowed by 35 Ill. Adm. Code 212.123(b) and 212.124.

b. No person shall cause or allow any visible emissions of fugitive particulate matter from any process, including any material handling or storage activity beyond the property line of the emission source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 Ill. Adm. Code 212.301 and 212.314.

c. Pursuant to 35 Ill. Adm. Code 212.309(a), the emission units described in 35 Ill. Adm. Code 212.304 through 212.308 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.

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.

d. 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 this Subpart, 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 Agency's review of the operating program.

4a. Pursuant to 35 Ill. Adm. Code 218.401(a), no owner or operator of a subject flexographic, packaging rotogravure or publication rotogravure printing line shall apply at any time any coating or ink unless the VOM content does not exceed the limitation specified in either 35 Ill. Adm. Code 218.401(a)(1) or (a)(2) below. Compliance with this 35 Ill. Adm. Code 218.401 must be demonstrated through the applicable coating or ink 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 218.404(c). As an alternative to compliance with this subsection, a subject printing line may meet the requirements of 35 Ill. Adm. Code 218.401(b) or (c) below.

i. Forty percent VOM by volume of the coating and ink (minus water and any compounds which are specifically exempted from the definition of VOM); or

ii. Twenty-five percent VOM by volume of the volatile content in the coating and ink.

b. Pursuant to 35 Ill. Adm. Code 218.401(c), no owner or operator of a subject flexographic, packaging rotogravure or publication rotogravure printing line equipped with a capture system and control device shall operate the subject printing line unless the owner or operator meets the requirements in 35 Ill. Adm. Code 218.401(c)(1), (c)(2), or (c)(3) and 35 Ill. Adm. Code 218.401(c)(4), (c)(5) and (c)(6).

i. An incineration system is used which reduces the captured VOM emissions by at least 90 percent by weight; and

ii. The printing line is equipped with a capture system and control device that provides an overall reduction in VOM emissions of at least 60 percent where a flexographic printing line is employed; and

iii. The control device is equipped with the applicable monitoring equipment specified in 35 Ill. Adm. Code 218.105(d)(2) and except as provided in 35 Ill. Adm. Code 218.105(d)(3), the monitoring equipment is installed, calibrated, operated and maintained according to vendor specifications at all times the control device is in use; and

iv. The capture system and control device are operated at all times when the subject printing line is in operation. The owner or operator shall demonstrate compliance with this subsection by using the applicable capture system and control device test methods and procedures specified in 35 Ill. Adm. Code 218.105(c) through 35 Ill. Adm. Code 218.105(f) and by complying with the

recordkeeping and reporting requirements specified in 35 Ill. Adm. Code 218.404(e).

c. Pursuant to 35 Ill. Adm. Code 218.402(b), upon achieving compliance with 35 Ill. Adm. Code 218 Subpart H, the flexographic and rotogravure printing lines are not required to meet 35 Ill. Adm. Code 218 Subpart G (35 Ill. Adm. Code 218.301 or 218.302). Flexographic and rotogravure printing lines exempt from 35 Ill. Adm. Code 218 Subpart H are subject to 35 Ill. Adm. Code 218 Subpart G (35 Ill. Adm. Code 218.301 or 218.302). Rotogravure or flexographic equipment used for both roll printing and paper coating is subject to 35 Ill. Adm. Code 218 Subpart H.

5a. The thermal oxidizer (TO) shall be in operation at all times when the associated flexographic printing presses are using solvent-based inks and emitting air contaminants.

b. The thermal oxidizer combustion chamber shall be preheated to the temperature at which compliance was demonstrated during the most recent performance test or to at least the manufacturer's recommended temperature of 1,400°F in the absence of a compliance test. This temperature shall be maintained during operation of the associated flexographic printing presses when using solvent based inks.

6a. Emissions and operation of emission units constructed after June 15, 2005 shall not exceed the following limits:

i. Flexographic Printing Press No. 9 controlled with a thermal oxidizer (TO):

	Material Usage		VOM Emissions	
Materials	(Tons/Month)	(Tons/Year)	(Tons/Month)	(Tons/Year)
Inks	15.73	157.28	2.73	27.25
Solvent Clean Up	1.78	17.81	0.34	3.43
			Total	30.68

These limits are based on the maximum materials usage based on the maximum equipment capacity. Emissions of VOM are based on the maximum VOM content of the inks (90% by weight), the maximum VOM content of the clean up solvent (100% by Weight) and an overall reduction of VOM emissions by at least 80.75% (capture system and destruction of VOM by the oxidizer.

ii. Press No. 10:

	Material Usage		VOM Emissions	
Material	(Tons/Month)	(Tons/Year)	(Tons/Month)	(Tons/Year)
Inks	0.42	4.21	0.06	0.63
Solvent Clean Up	0.03	0.30	0.03	0.30
			Total	0.93

These limits are based on the maximum materials usage limits and based on the maximum equipment capacity. Emissions of VOM are based on the maximum VOM content of the inks (15% by weight) and the maximum VOM content of the solvent clean up (100% by weight).

iii. Compliance with the annual limits of Conditions 8(a)(i) and 8(a)(ii) 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).

b. Emissions and operation of emission units at the source, which were installed 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) shall not exceed the following limits:

i. Press Nos. 5 and 7 controlled by thermal oxidizer (TO):

	Material Usage		VOM Emissions	
Materials	(Tons/Month)	(Tons/Year)	(Tons/Month)	(Tons/Year)
Inks	9.32	93.18	1.61	16.14
Solvent Clean Up	1.35	13.42	0.26	2.58
			Total	18.72

These limits are based on the maximum materials usage limits are based on the maximum equipment capacity. Emissions of VOM are based on the maximum VOM content of the inks (90% by weight), the maximum VOM content of the clean up solvent (100% by Weight) and an overall reduction of VOM emissions by at least 80.75% (capture system and destruction of VOM by the TO.

ii. Press Nos. 1, 2, 6 and 8:

	Material Usage		VOM Emissions	
Material	(Tons/Month)	(Tons/Year)	(Tons/Month)	(Tons/Year)
Inks	1.58	15.79	0.24	2.37
Solvent Clean Up	0.12	1.20	0.12	1.20
			Total	3.57

These limits are based on the maximum materials usage limits and based on the maximum equipment capacity. Emissions of VOM are based on the maximum VOM content of the inks (15% by weight) and the maximum VOM content of the solvent clean up (100% by weight).

iii. Emissions and operation of the fuel combustion emission unit shall not exceed the following limits:

				Emission Factor	Emissions	
Material	(mmscf/Mo)	(mmscf/Yr)	Pollutant	(lbs/mmscf)	(lb/Mo)	(Tons/Yr)
Natural	7.15	71.5	NO_x	100	0.36	3.6

Gas	CO	84	0.30	3.0
	PM	7.6	0.03	0.3
	VOM	5.5	0.02	0.2

These limits define the potential emissions of VOM, PM, NO_x, and CO and are based on maximum usage, 8760 hours of operation, and AP-42, Tables 1.4-1 and 1.4-2 emission factors.

iv. 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 the emission units at the source, which were installed 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) below the levels that would trigger the applicability of these rules.

v. Compliance with annual limits of Conditions 6(b)(i) through 6(b)(iii) shall be determined on a daily basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).

7. This permit is issued based on the potential to emit (PTE) for hazardous air pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act being less than 10 tons/year of any single HAP or 25 tons/year of any combination of such HAPs, or such less quantity as USEPA may establish by rule which would require the Permittee to obtain a Clean Air Act Permit Program (CAAPP) permit from the Illinois EPA.

8a. Pursuant to 35 Ill. Adm. Code 201.282, every emission source or 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 11 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.

9a. Pursuant to 35 Ill. Adm. Code 218.404(a), the VOM content of each coating and ink 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 218.404.

b Pursuant to 35 Ill. Adm. Code 218.105(c)(1)(A), the requirements of 35 Ill. Adm. Code 218.105(c)(2) shall apply to all VOM emitting process emission units employing capture equipment (e.g., hoods, ducts), except if an emission unit is equipped with (or uses) a permanent total enclosure (PTE) that meets Illinois EPA and USEPA specifications, and which directs all VOM to a control device, then the emission unit is exempted from the requirements described in 35 Ill. Adm. Code 218.105(c)(2). The Illinois EPA and USEPA specifications to determine whether a structure is considered a PTE are given in Procedure T of Appendix B of 35 Ill. Adm. Code Part 218. In this instance, the capture efficiency is assumed to be 100 percent and the emission unit is still required to measure control efficiency using appropriate test methods as specified in 35 Ill. Adm. Code 218.105(d).

c. Pursuant to 35 Ill. Adm. Code 218.105(c)(2), the capture efficiency of an emission unit shall be measured using one of the four protocols given in 35 Ill. Adm. Code 218.105(c)(2)(A) through 218.105(c)(2)(D). Any error margin associated with a test protocol may not be incorporated into the results of a capture efficiency test. If these techniques are not suitable for a particular process, then an alternative capture efficiency protocol may be used, provided that the alternative protocol is approved by the Illinois EPA and approved by the USEPA as a SIP revision.

d. Pursuant to 35 Ill. Adm. Code 218.105(d)(1), the control device efficiency shall be determined by simultaneously measuring the inlet and outlet gas phase VOM concentrations and gas volumetric flow rates in accordance with the gas phase test methods specified in 35 Ill. Adm. Code 218.105(f).

e. Pursuant to 35 Ill. Adm. Code 218.105(e)(1), the overall efficiency of the emission control system shall be determined as the product of the capture system efficiency and the control device efficiency or by the liquid/liquid test protocol as specified in 40 CFR 60.433, for each solvent recovery system. In those cases in which the overall

efficiency is being determined for an entire line, the capture efficiency used to calculate the product of the capture and control efficiency is the total capture efficiency over the entire line.

f. Pursuant to 35 Ill. Adm. Code 218.105(f), the methods in 40 CFR Part 60, Appendix A, delineated below shall be used to determine control device efficiencies.

i. 40 CFR Part 60, Appendix A, Method 1 or 1A, shall be used for sample and velocity traverses.

ii. 40 CFR Part 60, Appendix A, Method 2, 2A, 2C or 2D, shall be used for velocity and volumetric flow rates.

iii. 40 CFR Part 60, Appendix A, Method 3, shall be used for gas analysis.

iv. 40 CFR Part 60, Appendix A, Method 4, shall be used for stack gas moisture.

v. 40 CFR Part 60, Appendix A, Methods 2, 2A, 2C, 2D, 3 and 4, shall be performed, as applicable, at least twice during each test run.

vi. Use of an adaptation to any of the test methods specified in 35 Ill. Adm. Code 218.105(f)(1), (2), (3), (4), (5) and (6) may not be used unless approved by the Illinois EPA and the USEPA on a case by case basis. An owner or operator must submit sufficient documentation for the Illinois EPA and the USEPA to find that the test methods specified in 35 Ill. Adm. Code 218.105(f)(1), (2), (3), (4), (5) and (6) will yield inaccurate results and that the proposed adaptation is appropriate.

10a. Pursuant to 35 Ill. Adm. Code 218.105(d)(2)(A)(i), an owner or operator that uses an afterburner or carbon adsorber to comply with any Section of 35 Ill. Adm. Code Part 218 shall use Illinois EPA and USEPA approved continuous monitoring equipment which is installed, calibrated, maintained, and operated according to vendor specifications at all times the control device is in use except as provided in 35 Ill. Adm. Code 218.105(d)(3). The continuous monitoring equipment must monitor for each afterburner which does not have a catalyst bed, the combustion chamber temperature of each afterburner.

b. Pursuant to 35 Ill. Adm. Code 218.105(d)(2)(B), an owner or operator must install, calibrate, operate and maintain, in accordance with manufacturer’s specifications, a continuous recorder on the temperature monitoring device, such as a strip chart, recorder or computer, having an accuracy of ± 1 percent of the temperature measured in degrees Celsius or ± 0.5°C, whichever is greater.

11a. Pursuant to 35 Ill. Adm. Code 218.404(c)(2), any owner or operator of a printing line subject to the limitations of 35 Ill. Adm. Code 218.401 and complying by means of 35 Ill. Adm. Code 218.401(a) 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 and ink as applied on each printing line.

ii. The VOM content of each coating and ink as applied each day on each printing line.

b. Pursuant to 35 Ill. Adm. Code 218.404(e)(2), any owner or operator of a printing line subject to the limitations of 35 Ill. Adm. Code 218.401 and complying by means of 35 Ill. Adm. Code 218.401(c) shall collect and record all of the following information each day for each printing line and maintain the information at the facility for a period of three years:

i. Control device monitoring data.

ii. A log of operating time for the capture system, control device, monitoring equipment and the associated printing line.

iii. A maintenance log for the capture system, control device and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages.

12a. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:

i. Records addressing use of good operating practices for the thermal oxidizer:

A. Records for periodic inspection of the emission sources with date, individual performing the inspection, and nature of inspection; and

B. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.

ii For Press 9 and Press W-10, name, usage (tons/month and tons/year), VOM and HAP content (% weight), VOM and HAP emissions (tons/month and tons/year) for the following materials:

A. Inks; and

B. Solvent Clean Up.

ii For Press Nos. 5 and 7 and Press Nos. 1, 2, 6 and 8, name, usage (lb/month and tons/year), VOM and HAP content (% weight), VOM and HAP emissions (lbs/month and tons/year) for the following materials:

A. Inks; and

B. Solvent Clean Up.

iv. Daily weighted average VOM content of inks (as applied) minus water and other exempted compounds each day;

v. Natural gas usage (mmscf/month and mmscf/year); and

vi. Monthly and annual emissions of CO, NO_x, PM, VOM and HAP 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) 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.

13a. Pursuant to 35 Ill. Adm. Code 218.404(c)(3), any owner or operator of a printing line subject to the limitations of 35 Ill. Adm. Code 218.401 and complying by means of 35 Ill. Adm. Code 218.401(a) shall notify the Illinois EPA in the following instances:

i. Any record showing violation of 35 Ill. Adm. Code 218.401(a) shall be reported by sending a copy of such record to the Illinois EPA within 30 days following the occurrence of the violation.

ii. At least 30 calendar days before changing the method of compliance with 35 Ill. Adm. Code 218.401 from 35 Ill. Adm. Code 218.401(a) to 35 Ill. Adm. Code 218.401(b) or (c), the owner or operator shall comply with all requirements of 35 Ill. Adm. Code 218.404(d)(1) or (e)(1), respectively. Upon changing the method of compliance with 35 Ill. Adm. Code 218.401 from 35 Ill. Adm. Code 218.401(a) to 35 Ill. Adm. Code 218.401(b) or (c), the owner or operator shall comply with all requirements of 35 Ill. Adm. Code 218.404(d) or (e), respectively.

b. Pursuant to 35 Ill. Adm. Code 218.404(e)(3), any owner or operator of a printing line subject to the limitations of 35 Ill. Adm. Code 218.401 and complying by means of 35 Ill. Adm. Code 218.401(c) shall notify the Illinois EPA in the following instances:

i. Any record showing violation of 35 Ill. Adm. Code 218.401(c), shall be reported by sending a copy of such record to the Illinois EPA within 30 days following the occurrence of the violation.

ii. At least 30 calendar days before changing the method of compliance with 35 Ill. Adm. Code 218.401 from 35 Ill. Adm. Code 218.401(c) to 35 Ill. Adm. Code 218.401(a) or (b), the owner or operator shall comply with all requirements 35 Ill. Adm. Code

218.404(c)(1) or (d)(1), respectively. Upon changing the method of compliance with 35 Ill. Adm. Code 218.401 from 35 Ill. Adm. Code 218.401(c) to 35 Ill. Adm. Code 218.401(a) or (b), the owner or operator shall comply with all requirements of 35 Ill. Adm. Code 218.404(c) or (d), respectively.

14. 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. 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.

15. 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 that this permit has been revised to allow addition on printing press 10 and modify the emission limits of existing printing presses and printing press 9.

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

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

Date Signed: _____

ECB:GMK:jws

cc: Region 1