COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
FIELD OPERATIONS - BUREAU OF AIR QUALITY

OPERATING PERMIT

In accordance with provisions of the Air Pollution Control Act, the act of January 8, 1960, P.L. 2119, as amended, and after due consideration of an application received under Chapter 127 of the Rules and Regulations of the Department of Environmental Protection, the Department hereby issue this permit for the operation of the air contamination source(s) described below:

		Source(s)	
Permit No.	OP-46-0018A		Facility NO_x & VOC Em ; Sources
Owner	Brown Printing Company	**Air**	Thermal Oxidizers
Address	668 Gravel Pike	**Cleaning**	
	East Greenville, PA 18041	**Device**	
Attention	Mr. Bill Booth	**Location**	668 Gravel Pike
	Environmental Coordinator		Upper Hanover Townsh
			Montgomery County

This permit is subject to the following conditions:

1. That the source(s) and any associated air cleaning devices are to be:

   a. operated in such a manner as not to cause air pollution;
   b. in compliance with the specifications and conditions of the appropriate Plan Approvals issued.
   c. operated and maintained in a manner consistent with good operating and maintenance practices.

2. This permit is valid only for the specific equipment, location and owner named above.

(SEE ADDITIONAL CONDITIONS ATTACHED)

Failure to comply with the conditions placed on this permit is a violation of Section 127.444 olation of this or any other provision of Article III of the Rules and Regulations of the Department of Envir: ental Protection will result in suspension or revocation of this permit and/or prosecution under Section 9 the Air Pollution Control Act.

Issued May 17, 2000

Francine Carlini
Regional Manager
Air Quality

~~Expires May 17, 2005~~

cc: Division of Permits, RCSOB
Administration
SEFO
Re (RN99)43-25

CONDITIONS (continued):

3. This Operating Permit is issued to the owner and operator for the operation of the sources listed below. This permit is a determination of Reasonably Available Control Technology (RACT) pursuant to 25 Pa. Code Section 129.91 for the sources listed in this condition. This Operating Permit incorporates the requirements of Plan Approvals bearing the numbers of 46-399-101A and PA-46-0018A. This Operating Permit replaces Operating Permit No. CP-46-0018 issued on September 26, 1996.

A. NOx emitting sources:

Sources	Manufacturer	Model	Capacity (MMBtu/hr)	Fuel
Boiler No. 1	Weil McLain	MGB-36	5.95	Natural Gas
Boiler No. 2	Power Flame	WCR3-6-25B	5.95	Natural Gas
Boiler No. 3	Power Flame	WCR3-6-25B	5.95	Natural Gas
Boiler No. 4	Bryan	CL-120-WT-FDO	0.96	No. 2 Oil
Water Heater	State Industries	SBT 100 199 Net 6F	0.2	Natural Gas
2 Propane Vaporizers	National	30 x 10	0.5	Propane
Fire Pump	Cummins	6BTA59F1		No. 2
2 Emergency Generators	Ford	LSG-8751-6005-A		Propane

B. Seven (7) printing presses:

Press No. 1002* (Harris, M1000A) (Removed from service in July 1996);
Press No. 1003* (Harris, M1000A1) (Removed from service in October 1997);
Press No. 1004 (Harris, M1000A2);
Press No. 1005 (Baker Perkins, G-14);
Press No. 1006 (Harris, M1000B);
Press No. 1007* (Mitsubishi, L-750XL) (Removed from service in March 1999);
Press No. 1008 (Mitsubishi, L-750XL);

* Denotes sources removed from the facility.

The VOC emissions from the presses are controlled by the following oxidizers operated in tandem:

TEC System thermal oxidizer, Model Katec 14,500 natural gas fired; Thermo Electron thermal oxidizer, Model Titan 21,000 natural gas fired.

CONDITIONS (continued):

C. Eight (8) ink jet printer Nos. 221, 225 through 228, 231 through 233.

D. Two (2) propane storage tanks (30,000 gallons each).

E. VOC sources with the emissions rated under the de minimus levels for each source category:

Source Category	Descriptions
2 Propane vaporizers	vaporize propane as fuel
7 Film processors	process film
Plating ovens	bake residual VOCs off plate
Etch mix tanks and ink mixers	mix inks, pigments, and thinners
Chemical storage room	chemical storage
Waste handling operations	consolidation of waste
2 Diesel storage tanks	for diesel and No. 2 fuel oil
Pre-press cleaning	clean photographic surfaces
13 Safety-Kleen cleaning sinks	parts cleaning and degreasing

4. The expiration date shown on the Operating Permit is for state purposes. For federal enforcement purposes the Plan Approval shall remain in effect as part of the State Implementation Plan until repealed pursuant to 40 C.F.R. 51 and approved by the U.S. Environmental Protection Agency.

5. Operating requirements for NOx emitting sources specified in Condition 3A of this Permit:

A. The sources shall be operated and maintained in accordance with manufacturer's specifications and good air pollution control practices.

B. The sources shall only fire the fuel(s) specified in Condition 3A of this Operating Permit as primary fuel(s) and propane as secondary fuel.

C. The operation of the emergency generators and the fire pump shall not exceed 500 hours each in a consecutive 12-month period.

D. The company shall record the date and the hours of operation for each emergency generator and the fire pump.

CONDITIONS (continued):

6. Operating requirements for the printing presses (Nos. 1002 to 1008) and the thermal oxidizers:

   A. Operating requirements:

      1. The printing presses and thermal oxidizers shall be operated in accordance with the manufacturer's specifications and good air pollution control practices.

      2. The thermal oxidizers shall be equipped with temperature monitoring and recording devices, which continuously indicate and record the temperatures of the combustion chamber or zone.

      3. The owner and operator shall operate the thermal oxidizers in such a manner that the temperature of the combustion chamber is maintained at a minimum of 1300°F to assure destruction efficiency of 98 percent with a minimum set point of 1325°F for TEC Systems (Katec) Model No. 14500 and Thermo Electron (Titan) Model No. 21000.

      4. The printing presses shall not start applying inks, fountain solutions and cleaning solvents before the thermal oxidizer combustion chamber reaches the temperature stated in Condition 6.A.3, above.

      5. VOC emissions from the press(es) dryer(s) shall not bypass one of the thermal oxidizers at any time.

      6. The thermal oxidizer combustion chamber temperature as set forth in Condition 6.A.3 shall be maintained for at least five minutes after the presses and the ovens are shut off.

      7. The exhaust rate from each press to the thermal oxidizers is specified below:

Presses	Exhaust Rate (SCFM)
1002*	4360
1003*	3500
1004	4050
1005	5350
1006	4050
1007*	5000
1008	4110

* Denotes sources removed from the facility.

CONDITIONS (continued):

The combined exhaust rate shall not exceed:

a. 14,500 SCFM for TEC Systems (Katec) Model No. 14500;

b. 21,000 SCFM for Thermo Electron (Titan) Model No. 21000.

8. The cleaning towels shall be placed in closed containers immediately after use.

9. The solvent laden towels shall be disposed of by acceptable means.

B. Emission limitations:

1. The owner and operator shall use the cleaning solvent which has the vapor pressure of less than 10 mm Hg at 20°C.

2. The VOC content of the etch solution, as applied, shall not exceed 3 percent (by weight). The alcohol content in the etch solution, as applied, shall not exceed 1.6 percent (by volume).

3. The VOC emissions from each press shall not exceed the rate specified below:

Presses	Hourly Rate lb/hr	Daily Rate lb/day	Annual Emissions tpy
1002*†	3.3	78.7	5.6
1003*†	2.6	61.4	5.2
1004	4.3	104.1	8.8
1005	7.1	169.7	11.8
1006	7.1	169.7	9.7
1007*†	4.1	98.6	6.5
1008	4.1	108.6	6.2
Total	**32.6**	**790.8**	**53.8**

* Denotes sources removed from the facility.
† Removed from service

The allowable emissions are based on the following facts:

a. The thermal oxidizer destruction efficiency is 98 percent.

CONDITIONS (continued):

b. The VOC capture efficiency is 100 percent for ink oil and 70 percent for etch solution.

c. The VOC capture efficiency for automated washing is 40 percent. The cloth retention for automated washing is 33 percent. The remaining amount of VOC is fugitive emissions.

d. The cloth retention for hand washing is 50 percent. The remaining amount of VOC is fugitive emissions.

4. The average hourly and average daily VOC emissions shall be calculated based on the actual monthly ink, etch solution, and cleanup solvent usage, the operating hours, and the number of image impressions.

C. Monitoring and Recordkeeping Requirements:

1. The owner and operator shall record and maintain the following information for the presses covered under this permit:

a. monthly ink, etch solution, and cleanup solvent usage;

b. the VOC content and the density of the ink, the etch solution and the cleanup solvent as applied;

c. number of image impressions;

d. total operating hours.

e. the amount of VOC as waste shipped out and the date of the shipment;

f. the temperature of the gases in the thermal oxidizer combustion chamber;

g. sufficient data and calculations to clearly demonstrate that the requirements specified in Condition 6.B above are met.

CONDITIONS (continued):

7. Operating requirements for the eight (8) ink jet printers:

   A. Emission limitations:

      VOC emissions from the ink jet printers shall not exceed, in total, 12.4 tons per year in a 12-month rolling sum.

   B. Operating Requirement:

      The printers shall be operated using good air pollution control practices.

   C. Recordkeeping Requirements:

      The owner/operator shall, on a monthly basis, keep data or information necessary to demonstrate compliance with Condition 7A of this Operating Permit.

8. Operating requirements for 30,000-gallon propane storage tanks:

   A. The tanks shall be operated in compliance with 25 Pa. Code Section 129.57.

   B. The annual propane throughput to each tank shall be recorded and records shall be maintained and made available to the Department upon request.

9. Operating requirements for the sources specified in Condition 3E of this Permit:

   A. The VOC emissions from each source category shall not exceed 3 pounds per hour, 15 pounds per day and 2.7 tons per year.

   B. The owner shall maintain records that clearly demonstrate to the Department that each source category is not subject to 25 Pa. Code Sections 129.91 through 129.94.

CONDITIONS (continued):

10. Condition 10 applies to the presses listed below. Condition 10 is not a determination of RACT. This Operating Permit incorporates Plan Approvals bearing the numbers PA-46-0018 and PA-46-0018A.

The sources are two nine (9) station lithographic printing press Nos. 1009 and 1010, manufactured by Heidelberg Harris, Model No. M2526, each equipped with a thermal incinerator manufactured by Stork Contiweb, Model No. 121-1460.

A. Operating Requirements:

a. Each printing press and thermal oxidizer shall be operated to meet the requirements specified in Conditions 6.A.1, 2, 5, 8, and 9.

b. The owner and operator shall operate the thermal oxidizer in such a manner that the temperature of the combustion chamber is maintained at a minimum of 1400°F, to assure a destruction efficiency of 99 percent.

c. The printing presses shall not start applying ink, fountain solutions and cleaning solvents before the thermal oxidizer combustion chamber temperature reaches 1400°F.

d. The thermal oxidizer combustion chamber temperature, as set forth in Condition 10.A.c., shall be maintained for at least five minutes after the press and the oven is shut off.

B. Emission Limitations:

a. The owner and operator shall use a cleaning solvent which has a vapor pressure of less than 10 mm Hg at 20°C.

b. The VOC content of the etch solution, as applied, shall not exceed 3 percent (by weight).

CONDITIONS (continued):

c. The VOC emissions from following presses shall not exceed the rate specified below:

Presses	Average Hourly Rate lb/hr	Daily Rate lb/day	Annual Emissions tpy
1009*	7.0	167.0	9.3
1010*			10.6
Total			**19.9**

The allowable emissions established are based on the facts specified in Conditions 6.B.3.b through d. The thermal oxidizer destruction efficiency is 99 percent for presses 1009 and 1010.

d. The average hourly and average daily VOC emissions shall be calculated based on the actual monthly ink, etch solution, and cleanup solvent usage, the operating hours, and the number of image Impressions.

C. Monitoring and Recordkeeping Requirements for Presses 1009 and 1010:

a. The owner and operator shall record and maintain the information specified in Conditions 6.C.1.a through f.

b. Sufficient data and calculations shall be maintained to clearly demonstrate that the requirements specified in Condition 10.B, above, are met.

CONDITIONS (continued):

D. New Source Review Requirements:

a. The following emission reduction credits (ERC) have been provided by permanently shutting down Presses 1001, 1002, and 1003, and permanently switching Press 1004 from catalytic incinerator control to a more efficient thermal incinerator control. This generates emission reduction credits (ERCs), after applying Reasonably Available Control Technology (RACT), in the amount of 17.1 tons per year specified below:

Sources	Allowable	Actual	After RACT
Press 1001		7.2	7.1
Press 1002		4.1	4.0
Press 1003	5.2	3.9	3.8
1004 Control		2.3	2.2
Total		**17.5**	**17.1**

The VOC emission net change from this facility for the five (5) year period of 1992 through 1996, after applying the offset ratio, is 24.0 tons per year as specified below:

Sources	Increase	After RACT	Offset Ratio	Allowable for Banking	Net Change
1001*		7.1	1.3:1.0	5.5	-5.5
1002*		4.0	1.0:1.0	4.0	-4.0
1003*	3.8	3.8	1.0:1.0	3.8	-3.8
1006	9.7				9.7
1007	6.5				6.5
1008	6.2				6.2
1009	9.3				9.3
Oxidizer	0.2				0.2
Video Jets	5.5				5.5
SK Sinks	1.4				1.4
Film Processors	0.2				0.2
Switch Control		2.2	1.3:1.0	1.7	-1.7
Total	**39.0**	**17.1**		**15.0**	**24**

* Denote sources removed from the facility under Plan Approval 46-320-101A.

CONDITIONS (continued):

b. The VOC emission net changes are specified below:

Sources	VOC Changes 1992	1996
Press 1001	-5.5 *	
Press 1002		-4.0
Press 1003		-3.8
Press 1006	9.7	
Press 1007	6.5	
Press 1008	6.2	
Press 1009		9.3
Oxidizer	0.2	
Video Jets	5.5	
Safety Kleen Sinks	1.4	
Film Processors	0.2	
Switch Control on Press 1004	-1.7 *	
Total	**22.5**	**1.5**
5 Year Increment		**24.0**

* Denotes an applied ratio of 1.3:1.0

c. The VOC and NOx emission changes since 1996 are listed below:

Sources	NOx Emissions (tpy) 1996	1998	VOC Emissions (tpy) 1996	1998
Press 1002			-4.0	
Press 1003			-3.8	
Press 1007*				-3.8
Press 1009	7.2		9.3	
Press 1010		7.2		10.6
Net Change			1.5	6.8
5 Year Increment		14.4		8.3

* Denote sources(s) removed from the facility under Plan Approval PA-46-0018.

CONDITIONS (continued):

11. Rule Effectiveness Conditions:

A. The company shall provide at least 41 hours of introductory training to new employees and 25 hours per year of refresher training on the proper operation and maintenance of the source/control device. The company shall keep records of the type and amount of training provided to each operator. The records shall be kept for a minimum of two years and be made available to the Department upon request.

B. The source(s) and air pollution control device(s) shall be operated and maintained in a manner consistent with the Master Operations and Maintenance Instructions (O & M) supplied by the manufacturer. A copy of the O & M instructions shall be kept at the site and be made available to the Department upon request. An outline of the O & M instructions is attached to this operating permit as an appendix. Operators must follow the O & M instructions and/or checklists and sign off daily. The records shall be kept for a minimum of two years and be made available to the Department upon request.

C. The company shall conduct a stack test once every five years to determine the overall control efficiency of the control device for VOC emissions. The company shall use the test methods and procedures approved by the Department's Source Testing and Monitoring Section. The test shall be conducted within the final year before the operating permit expires. Results shall be submitted to the Department for review at least 60 days prior to the expiration of the Operating Permit.

D. Coating composition and usage records required in Condition No. 6.C and No. 10.C are required for the Rule Effectiveness Program. These records shall be submitted to the Department once every six months. These records shall be kept for at least five (5) years and shall be made available to the Department upon its request.

~~12. General Conditions:~~

~~A. The company shall not impose conditions upon or otherwise restrict the Department's access to the aforementioned source(s) and/or any associated air cleaning device(s) and shall allow the Department to have access at any time to said source(s) and associated air cleaning device(s) with such measuring and recording equipment, including equipment recording visual observations, as the Department deems necessary and proper for performing its duties and for the effective enforcement of the Air Pollution Control Act.~~

CONDITIONS (continued):

~~B. The company, within one hour of occurrence, shall notify the Department, at 610-941-6241, of any malfunction of the source(s) or associated air cleaning device(s) which results in, or may possibly be resulting in, the emission of air contaminants in excess of the limitations specified in, or established pursuant to, any applicable rule or regulation contained in Article III of the Rules and Regulations of the Department of Environmental Protection. A written report shall be submitted to the Department within two working days following the incident describing the malfunctions and corrective actions taken.~~

~~C. If, at any time, the Department has cause to believe that air contaminant emissions from the aforementioned source(s) may be in excess of the limitations specified in, or established pursuant to, any applicable rule or regulation contained in Article III of the Rules and Regulations of the Department of Environmental Protection, the company shall be required to conduct whatever tests are deemed necessary by the Department to determine the actual emission rate(s). Such testing shall be conducted in accordance with the provisions of Chapter 139 of the Rules and Regulations of the Department of Environmental Protection, where applicable, and in accordance with any restrictions or limitations established by the Department at such time as it notifies the company that testing is required.~~

(KAL97)150.22

BROWN PRINTING COMPANY 9/96 (REVISED)

RULE EFFECTIVENESS PROGRAM

1. TRAINING PROGRAM

A. SOURCES (presses)

(1) Initial training for new employees. Two days introductory training, 16 hours total. Three days on the job training. Thirty-Six (36) hours total. Total initial training – 52 hours.

(2) Refresher training – 24 hours/year through monthly meetings.

(3) Recordkeeping – training records kept by attendance logs.

B. CONTROL DEVICES (thermal oxidizers)

(1) Initial training for new employees – 8 hours

(2) Refresher training – 4 hours/year

(3) Recordkeeping – training records kept by attendance logs

2. MAINTENANCE PROGRAM

A. SOURCES (presses)

(1) Preventive maintenance schedule (see attachment)

B. CONTROL DEVICES (thermal oxidizers)

(1) Preventive maintenance schedule (see attachment)

APPENDIX

BROWN PRINTING COMPANY RULE EFFECTIVENESS PROGRAM 4/96

SOURCES MAINTENANCE TASK	DAILY	MONTHLY	6 MONTHS
Check gear boxes			
Check oil level in press units			
Check press drive line			
Check rollstand brakes			
Check folders			
Check stackers			
Check press units			
Test oil from presses change if needed			
CONTROL DEVICE MAINTENANCE TASK	**3 MONTHS**	**6 MONTHS**	**YEARLY**
Inspect and clean U.V. scanner			
Clean lens on U.V. scanner			
Check system fan motor bearings, lube, if needed			
Check gas train for damage, loose mounting and wear			
Check gas valve actuators and linkage			
Perform flame current check			
Check dampers for smooth operation			
Perform gas valve tightness test			
Inspect main gas and pilot gas tubes for deterioration			
Perform flame failure test			
Oil or grease all linkage pivots, door hinges, etc.			
Inspect burner and burner cone for damage			

Re 30 (GJC99)78