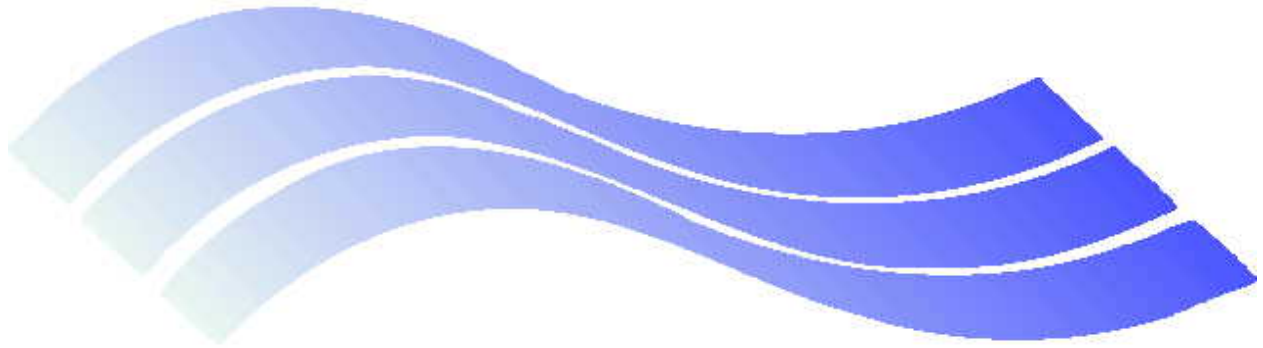


SACRAMENTO METROPOLITAN



AIR QUALITY
MANAGEMENT DISTRICT

Graphic Arts Operations

Policy Manual

January 2008

Graphic Arts Operations

A. DESCRIPTION

Graphic arts operations consist of five types of printing operations, namely: flexographic, lithographic, letterpress, screen printing and gravure. It also includes coating or laminating operation on flexible packaging materials manufactured for the packaging industry. Coating operations, which are performed by a machine having only coating units and no printing units, are not graphic arts operations. However, a stand-alone coating operation in flexographic printing is classified as graphic arts operation.

B. APPLICATIONS

1. Permitting Requirements

Any graphic arts operation which would emit any pollutant (reactive organic compounds), without the benefit of an air pollution control device, greater than or equal to 2 pounds in any 24 hours period.

2. Rule Exemption

The requirements of prohibitory Rule 450 – Graphic Arts Operations, shall not apply to any graphic arts operation at a stationary source which either: (a) has actual emissions of less than or equal to 60 lb/month of reactive organic compounds from all graphic arts operations and cleaning materials; or (b) receives a permit that limits the potential to emit to less than or equal to 175 lb/month of reactive organic compounds from all graphic arts operations and cleaning materials.

3. Data Forms

The following forms must be completed and submitted by the applicant when applying for an Authority to Construct and/or Permit to Operate any graphic arts printing equipment:

Form G100	Application for Authority to Construct and/or Permit to Operate
Form PP100	Printing Press Equipment
Form VI100	Afterburner (If an emission control device is used)
Form HRA100	Health Risk Assessment Information

4. Additional Information

- a) If applicable, an initial health risk screening depending on the location of the source and proposed emissions.

C. COMPLETENESS DETERMINATION

An application is deemed complete with the submittal of the following information:

1. Completed application Forms G100, PP100 and HRA100 with the original signature of the owner/proprietor or responsible officer of the company.
2. Applicable permit fee in accordance with Section D - Fees.
3. Any additional information that may be requested in order to perform a health risk assessment.

D. FEES

1. **New Printing Press**
Every applicant for an Authority to Construct a new graphic arts printing equipment shall pay at least one half of the initial permit fee specified in Rule 301, Section 308 upon filing the application. Prior to issuance of a Permit to Operate, the applicant shall pay the remaining unpaid portion of the initial permit fee, if applicable. Permit fee for any graphic arts printing equipment will be based on **Schedule 1** [Rule 301, Section 308.2] where the rating is dependent on the cumulative total rated horsepower of all drive motors in the equipment.
2. **Modification of Existing Graphic Arts Printing Equipment**
When an application is filed for a permit involving modification to an existing equipment – either alteration resulting in a change to the existing equipment or a revision of conditions on a permit to operate – the applicant shall pay a permit fee based on Rule 301, Section 306.2.
3. **Change of Location or Ownership of Existing Graphic Arts Printing Equipment**
When an application is filed for a permit because the equipment has been moved to a new location, or ownership has been transferred from one person to another, the applicant shall pay a permit fee equivalent to the permit renewal fee specified in Rule 301, Section 303.

E. REGULATIONS

Operation of any type of graphic arts printing equipment may be subject to some or all of the following rules and regulations.

1. **SMAQMD Rules and Regulations**
 - a) Rule 201 - General Permit Requirements
This rule provides the procedure for the review of new sources of air pollution and of the modification and operation of existing sources through the issuance of permits.
 - b) Rule 202 - New Source Review
This rule provides the review of new and modified stationary air pollution sources and to provide mechanisms, including Best Available Control Technology (BACT) and emission offsets, by which authorities to construct such sources may be granted without interfering with the attainment or maintenance of ambient air quality standards.
 - 1) **California Environmental Quality Act (CEQA)**
The SMAQMD has developed a comprehensive permitting CEQA Guidance document. Project reviews conducted in accordance with the policy manuals contained therein (including this manual) have been determined to meet the CEQA criteria of ministerial and do not require additional CEQA review.
In the event a project falls outside the scope of this policy manual (e.g. a new BACT determination or other situation already described within the CEQA guidance document), the project shall follow the steps for CEQA review as detailed in the guidance document.

- c) Rule 301 - Permit Fees – Stationary Source
This rule establishes fees to be charged to owners/operators of a stationary source required to obtain a permit.
- d) Rule 306 - Air Toxic Fees
This rule establishes fees to be charged stationary sources subject to the Air Toxics “Hot Spots” Information and Assessment Act.
- e) Rule 402 - Nuisance
This rule protects the public’s health and welfare from the emission of air contaminants, which constitute a nuisance.
- f) Rule 450 - Graphic Arts Operations
This rule limits the emission of volatile organic compounds from VOC-containing materials used by graphic arts operations.

2. Federal Regulations

- a) 40 CFR Part 63 Subpart KK - National Emission Standards from the Printing and Publishing Industry
This regulation applies to any new or existing facility that is a major source of hazardous air pollutant (HAP), where publication rotogravure, product and packaging rotogravure, or wide web flexographic printing presses are operated.

F. STANDARDS

1. SMAQMD Regulation 2 – Permits

- a) Rule 202 – New Source Review
 - 1) Best Available Control Technology (BACT) – Section 301 requires a new emissions unit or modification of an existing emissions unit to apply BACT if it would result in an increase in quarterly emissions and if the daily potential to emit meets or exceeds the levels specified in Section 302.1 and below:

Pollutant	BACT Trigger Level lb/day
Reactive Organic Compound, ROC	10
Nitrogen Oxides, NOx	10
Sulfur Oxides, SOx	10
Particulate Matter, PM10	10
Carbon Monoxide, CO	550

- 2) BACT is defined as the most effective emission control device, emission limit, or technique which has been required or use for the type of equipment. BACT determinations for graphic arts operations are as follows:

Printing Operation	BACT Requirements
Lithographic Printing	Inks and Coatings: 2.5 lb/gal Fountain Solution: 8% by volume Blanket and Roller Wash: 2.5 lb/gal or 5 mm Hg @ 68°F Metering Roller Cleaner/Plate Cleaner 2.5 lb/gal or 25 mm Hg @ 68°F
Flexographic Printing	Inks: Water-reducible inks with 1.5 lb VOC/gal Cleanup Solvent: No VOC.

2. SMAQMD Regulation 4 – Prohibitory Rules

a) Rule 402 - Nuisance

The District regulates emissions of toxic substances through this rule. A new or modified stationary source is exempt from toxics review if the excess cancer risk associated with the project does not exceed 0.1 theoretical lifetime cancer cases per million and the non-cancer risk Hazard Index (HI) is less than 1.

b) Rule 450 - Graphic Arts Operations

This prohibitory rule limits VOC emissions from graphic arts operations. The source must comply with the VOC standards for inks, coatings, adhesives, fountain solutions, and cleaning solvents in Sections 301 and 302.1. An air pollution control device may be used to vent emissions from printing equipment in lieu of complying with the VOC content requirements, provided the air pollution control equipment meets the conditions specified in Section 303.

K. EMISSIONS CALCULATION

Emissions from graphic arts operation is calculated using the material balance method. It is assumed that all the VOC in the inks, adhesive, fountain solution, and cleanup solvents are emitted in the press room unless these emissions are vented and controlled by an air pollution control equipment.

1. Uncontrolled Emissions in Non-Heatset Operations

$$\text{ROC Emissions (lb/quarter)} = \frac{[(\text{Inks and Coating Wt., lb/qtr}) \div (\text{Density, lb/gal})][\text{VOC, lb/gal}][0.05] + [\text{Adhesive, gal/qtr}][\text{VOC, lb/gal}] + [\text{Fountain Solution, gal/qtr}][\text{VOC, lb/gal}] + [\text{Makeup and Cleanup Solvents, gal/qtr}][\text{VOC, lb/gal}]$$

- a) The volume of material in the VOC in the above formula includes water and exempt compounds.
b) A retention factor of 95% is used for non-heatset lithographic inks and oil-based coatings.

2. Uncontrolled Emissions in Heatset Operations

$$\text{ROC Emissions (lb/quarter)} = \frac{[(\text{Inks and Coating Wt., lb/qtr}) \div (\text{Density, lb/gal})][\text{VOC, lb/gal}][0.80] + [\text{Adhesive, gal/qtr}][\text{VOC, lb/gal}] + [\text{Fountain Solution, gal/qtr}][\text{VOC, lb/gal}] + [\text{Makeup and Cleanup Solvents, gal/qtr}][\text{VOC, lb/gal}]$$

- a) The volume of material in the VOC in the above formula includes water and exempt compounds.
- b) A retention factor of 20% is used for heatset lithographic inks and oil-based coatings.

3. Controlled Emissions in Heatset Operations

$$\text{ROC Emissions (lb/quarter)} = \frac{[(\text{Inks and Coating Wt., lb/qtr}) \div (\text{Density, lb/gal})][\text{VOC, lb/gal}][0.80] [1 - (\% \text{ Collection Efficiency})(\% \text{ Control Device Efficiency})] + [\text{Adhesive, gal/qtr}][\text{VOC, lb/gal}] + [\text{Fountain Solution, gal/qtr}][\text{VOC, lb/gal}] + [\text{Makeup and Cleanup Solvents, gal/qtr}][\text{VOC, lb/gal}]$$

- a) The volume of material in the VOC in the above formula includes water and exempt compounds.
- b) A retention factor of 20% is used for heatset lithographic inks and oil-based coatings.

L. RISK ASSESSMENT

The District has the authority and responsibility to protect the public from the discharge of air contaminants or other materials, which endanger health and safety. Hence, the Supplemental Risk Assessment Guidelines for New and Modified Stationary Sources was issued in December 2000.

Any new or modified stationary sources are evaluated if they emit toxic air contaminants included under:

- 1. All toxic air contaminants listed by the California Air Resources Board pursuant to California Health and Safety Code, Section 39662b.
- 2. Substances listed as hazardous air pollutants pursuant to subsection (b) of Section 12 of the Federal Act (42 U.S.C. Sec 7412(b)).

The District's *Supplemental Risk Assessment Guidelines for New and Modified Stationary Sources [December 2000]* provides health risk thresholds as shown below:

Excess Cancer Risk	Action Required
≤ 0.1 per million	Exempt from toxic review.
> 0.1 per million but ≤ 1 per million	No significant risk; No action required.
> 1 per million but ≤ 10 per million	Acceptable risk; Provide TBACT
> 10 per million	Denial of permit.

M. ENGINEERING EVALUATION

Please refer to the sample permit evaluation in Exhibit 'A'.

N. AUTHORITY TO CONSTRUCT

Please refer to the sample permit to construct in Exhibit 'B'.

Exhibit A

Sample Engineering Evaluation Graphics Arts Operations



AUTHORITY TO CONSTRUCT EVALUATION

APPLICATION NO.: A/C 99999
DATE: Sept. 25, 2007
ISSUING ENGINEER: _____

- A. FACILITY NAME:** ABC PRINTING & LITHOGRAPH
- B. LOCATION:** 1234 ARDEN WAY, SACRAMENTO, CA 95825
- C. PROPOSAL:** INSTALLATION AND OPERATION OF A NEW PRINTING PRESS
- D. INTRODUCTION:**

ABC Printing & Lithograph currently operates two lithographic printing presses. They propose to replace one press (P/O 18460) with a new 6-color lithographic printing press.

E. EQUIPMENT DESCRIPTION:

Printing Press Komori
 Model LS640
 Serial No. 357
 No. of Printing Units - 6
 W/ 1 Coating Unit
 Sheet Width - 40"
 45 HP

F. PROCESS RATE/FUEL USAGE:

Graphic Arts Materials	Proposed Quarterly Usage
Inks	3,500 lb
Coating	1,650 lb
Fountain Solution Concentrate	50 gal
Alcohol Replacement	20 gal
Blanket and Roller Wash	300 gal
Metering Roller Cleaner	5 gal

G. OPERATING SCHEDULE:

The printing press will normally operate 8 hours/day, 5 days/week.

H. CONTROL EQUIPMENT EVALUATION:

No add-on control equipment for ROC is proposed for this printing press.

I. EMISSIONS CALCULATIONS:

1) HISTORIC POTENTIAL TO EMIT:

Historic Potential to Emit, ROC = 0. This is a new emissions unit.

2) PROPOSED POTENTIAL TO EMIT:

Material	Material Usage lb or gal/qtr	VOC Content lb/gal	Proposed Potential to Emit lb/quarter
Inks (Den = 8.3)	3,560 lb	1.2	26
Coating (D = 8.45)	1,670 lb	1.96	387
Fountain Solution Concentrate	35	2.17	76
Alcohol Replacement	16	4.14	66
Blanket and Roller Wash	285	6.77	1,929
Metering Roller Cleaner	3	4.83	15
Total			2,499

Proposed emissions for this new press will be rounded to 2,500 lb/quarter.

3) CALCULATION OF BACT TRIGGER:

NEI (BACT) = Net Emissions Increase
= Proposed Potential to Emit - Historic Potential to Emit
MPE = Maximum Potential Emissions on a 24-Hour Day Operation

Pollutant	NEI (BACT) lb/quarter	Is NEI (BACT) >0?	MPE lb/day	BACT Trigger Level lb/day	Is BACT Required?
ROC	2,500	Yes	>10	≥10	Yes
NOx	0	No	N/A	≥10	N/A
SOx	0	No	N/A	≥10	N/A
PM10	0	No	N/A	≥10	N/A
CO	0	No	N/A	≥550	N/A

4) CALCULATION OF OFFSET TRIGGER FOR ROC AND NOx:

Permit No.	Emissions Unit	Stationary Source Potential to Emit lb/quarter	
		ROC	NOx
P/O 18460	Printing Press	Modified in A/C 20123	
P/O 18461	Printing Press	2,000	0
A/C 20123	Printing Press	2,500	0
Total		4,500	0
Offset Trigger Level		≥5,000	≥5,000

5) CALCULATION OF OFFSET TRIGGER FOR SOx, PM10 AND CO:

Permit No.	Emissions Unit	Stationary Source Cumulative Emission Increase Since 01-01-77 lb/quarter		
		SOx	PM10	CO
P/O 18460	Printing Press	Modified in A/C 20123		
P/O 18461	Printing Press	0	0	0
A/C 20123	Printing Press	0	0	0
Total		0	0	0
Offset Trigger Level		≥13,650	≥7,500	≥49,500

6) CALCULATION OF EMISSION OFFSETS FOR ROC AND NOx:

Emission offsets are not triggered for ROC and NOx.

7) CALCULATION OF EMISSION OFFSETS FOR SOx, PM10 AND CO:

Emission offsets are not triggered for SOx, PM10 and CO.

J. COMPLIANCE WITH RULES AND REGULATIONS:

1) H&S Code § 42301.6 (AB 3205) COMPLIANCE:

The ABC Printing & Lithograph facility is not located within 1,000 feet from the nearest school. Therefore, this permit action is not subject to the public notification requirements of H&S Code § 42301.6.

2) NSR COMPLIANCE:

Rule 202 - New Source Review

Section 112 - Exemption - Notification Requirements The potential to emit from this emissions unit does not meet or exceed the following levels requiring public noticing pursuant to the requirements of Sections 405, 406, 407 and 409.2:

<u>Pollutant</u>	<u>lb/qtr</u>
ROC	5,000
NOx	5,000
SOx	13,650
PM10	7,500
CO	49,500

Section 301 - Best Available Control Technology The proposed potential to emit from this emissions unit exceeds the BACT threshold for the affected pollutant as specified in Section 301.1 and below. Therefore, BACT will be required for ROC.

<u>Pollutant</u>	<u>lb/day</u>
ROC	10
NOx	10
SOx	10
PM10	10
CO	550

The South Coast AQMD, San Joaquin Unified APCD, and Bay Area AQMD BACT Manuals were reviewed for non-heatset lithographic offset printing as shown in the table below. The District's BACT Determination No. 5 for lithographic printing process requires the use of low VOC inks, coatings, roller & blanket wash, and 8% VOC by volume fountain solution.

Pollutant	Lithographic or Offset Printing – Non-Heatset BACT: 1. Technologically Feasible/Cost Effective 2. Achieved in Practice		
	South Coast AQMD 12-05-03	San Joaquin Valley Unified APCD 9-09-00	Bay Area AQMD 8-24-98
ROC	Low VOC fountain solution ($\leq 8\%$ by vol VOC); Low vapor pressure (≤ 10 mm Hg VOC composite partial pressure) or Low VOC (≤ 100 g/l) blanket and roller washes; Oil-based or UV curable inks; and Compliance with AQMD Rules 1130 and 1171.	1. Less than 5% VOC by weight for inks; less than 8% by volume fountain solutions; For high-end graphics, less than 30% VOC by weight for inks and less than 15% by volume for fountain solution. <i>VOC capture and control system utilizing thermal or catalytic oxidizer and carbon adsorption system were found <u>not to be cost effective</u>.</i>	1. Low VOC fountain solution ($\leq 6\%$ by vol); automatic blanket & roller wash with solvent capture and & recycle; and cleanup solvents with < 2.5 lb VOC/gal or VOC vapor pressure < 5 mm Hg; and kerosene-like oil based inks. If cost effective, capture and vent VOC to afterburner or carbon adsorption system with $\geq 98.5\%$ destruction/recovery device efficiency; or <i>VOC outlet ≤ 10 ppm</i>
	2. Same as No. 1.	2. Same as No. 1.	Low VOC fountain solution ($\leq 8\%$ by vol); and minimum possible VOC blanket wash & roller & tray washes; and cleanup solvents with ≤ 7.5 lb VOC/gal and VOC vapor pressure ≤ 25 mm Hg or $\leq 30\%$ by vol VOC; and kerosene-like oil based inks.

The District re-evaluated the BACT top down analysis for offset lithographic non-heatset printing. The control technology used in this evaluation was limited to carbon adsorption because this control option is accepted to have the lowest capital and operating costs when compared with the thermal and catalytic incineration control options. The evaluation revealed that venting press emissions to a carbon adsorption control system will not be cost effective for uncontrolled ROC emissions of 38,942 lb/year or less. The District's cost effectiveness level for ROC is \$17,500 per ton of pollutant controlled.

In view of the above analysis, installing a carbon adsorption system in non-heatset lithographic printing operations is deemed not a feasible control option.

Consequently, the other control technologies with higher capital, direct and indirect operating costs will, likewise, not be feasible. With a maximum allowable ROC emission of 2,500 lb/quarter, venting emissions from the press to a carbon adsorber is deemed not cost-effective.

The current BAAQMD and SMAQMD Rules and Regulations provided new definitions for materials used for solvent cleaning: blanket and roller wash, and metering roller and plate cleaners. No BACT determination has been published for the metering roller and plate cleaners. Hence, BACT for this specialty cleaner will be satisfied by complying with the District Rule 450 standards for metering roller and plate cleaners.

Therefore, BACT requirements for this printing press are summarized below:

Materials	BACT Standards	Compliant Materials Used
Inks	Kerosene-like oil based 2.5 lb/gal (Rule 450, Section 301.1)	1.2 lb/gal
Coatings		1.96 lb/gal
Fountain Solution	Low-VOC, 8% by volume	0.96% by volume (A)
Blanket & Roller Wash	2.5 lb/gal or 5 mm Hg @ 68°F	6.77 lb/gal <u>2.7 mm Hg @ 68°F</u>
Metering Roller Cleaner/ Plate Cleaner	2.5 lb/gal or 25 mm Hg @ 68°F	4.83 lb/gal <u>20.0 mm Hg @ 68°F</u>

(A) Refer to attached "Compliance Determination for Fountain Solutions" spreadsheet.

Section 302 - Offset The cumulative emission increase for this stationary source do not meet or exceed the ROC trigger level as specified in Section 302.1 and below. Therefore, emission offsets will not be required.

<u>Pollutant</u>	<u>lb/qtr</u>
ROC	5,000
NOx	5,000
SOx	13,650
PM10	7,500
CO	49,500

Section 307 – Denial, Failure to Meet CEQA The District's significance thresholds for project operational emissions are as follows:

<u>Pollutant</u>	<u>lb/day</u>
ROC	65
NOx	65

This facility will have an ROC facility limit of 4,500 lb/quarter. Average daily emission is calculated by dividing the quarterly emissions by 92 days/quarter, which is below the significance threshold. Therefore, this permit evaluation is not subject to CEQA review.

3) PSD COMPLIANCE:

Not applicable.

4) PROHIBITORY RULES COMPLIANCE:

Rule 450 - Graphic Arts Operations

The VOC content of the inks and coatings currently being used at this facility comply with the VOC standard of 300 g/l (2.5 lb/gal) as specified in Section 301.1. The fountain solutions and solvent cleaning materials likewise meet the VOC and/or VOC composite partial pressure requirements in Sections 301.2 & 302.1. This facility has complied with the recordkeeping requirements in Section 501 of this rule.

5) NSPS COMPLIANCE:

Not applicable.

6) NESHAP COMPLIANCE:

40 CFR 63 National Emission Standards for Hazardous Air Pollutants for Source Categories, Subpart KK – National Emission Standards for the Printing and Publishing Industry

This Federal NESHAP applies to a new and existing facility that is a major source of hazardous air pollutants (HAP) where publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing presses are operated. ABC Printing & Lithograph is not a major source of HAPs and operates a lithographic printing press. Therefore, this Federal regulation is not applicable.

K. RECOMMENDATIONS:

This equipment should comply with all applicable District rules and regulations. An authority to construct a lithographic printing press should be issued to ABC Printing & Lithograph, Inc. with the following conditions.

L. CONDITIONS:

Refer to conditions in Authority to Construct No. 20123.

PREPARED BY: _____ **DATE:** Sept. 25, 2007

REVIEWED BY: _____ **DATE:** _____

Exhibit B

Sample Authority to Construct Graphic Arts Operations

SAMPLE

**AIR QUALITY
MANAGEMENT DISTRICT****AUTHORITY TO CONSTRUCT**

A/C NO.: 99999**ISSUED BY:** _____**DATE ISSUED:** SEPT. 25, 2007**DATE EXPIRES:** SEPT. 25, 2009**ISSUED TO:** ABC PRINTING & LITHOGRAPH**LOCATION:** 1234 ARDEN WAY, SACRAMENTO, CA 95825**DESCRIPTION:** LITHOGRAPHIC PRINTING PRESS, KOMORI, SHEET-FED OFFSET, MODEL LS640, SERIAL NO. 357, 6 COLORS, WITH A COATING UNIT, 90 HP**AUTHORITY TO CONSTRUCT CONDITIONS****GENERAL**

1. THE EQUIPMENT SHALL BE PROPERLY MAINTAINED.
2. THE AIR POLLUTION CONTROL OFFICER AND/OR AUTHORIZED REPRESENTATIVES, UPON THE PRESENTATION OF CREDENTIALS, SHALL BE PERMITTED:
 - A. TO ENTER UPON THE PREMISES WHERE THE SOURCE IS LOCATED OR IN WHICH ANY RECORDS ARE REQUIRED TO BE KEPT UNDER THE TERMS AND CONDITIONS OF THIS AUTHORITY TO CONSTRUCT, AND
 - B. AT REASONABLE TIMES TO HAVE ACCESS TO AND COPY ANY RECORDS REQUIRED TO BE KEPT UNDER THE TERMS AND CONDITIONS OF THIS AUTHORITY TO CONSTRUCT, AND
 - C. TO INSPECT ANY EQUIPMENT, OPERATION, OR METHOD REQUIRED IN THIS AUTHORITY TO CONSTRUCT, AND
 - D. TO SAMPLE EMISSIONS FROM THE SOURCE OR REQUIRE SAMPLES TO BE TAKEN.
3. THIS AUTHORITY TO CONSTRUCT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26, PART 4, CHAPTER 3, OF THE CALIFORNIA HEALTH AND SAFETY CODE OR THE RULES AND REGULATIONS OF THE AIR QUALITY MANAGEMENT DISTRICT.
4. A LEGIBLE COPY OF THIS AUTHORITY TO CONSTRUCT SHALL BE MAINTAINED ON THE PREMISES WITH THE EQUIPMENT.

EMISSION LIMITATIONS

5. THE PRINTING OPERATIONS SHALL NOT DISCHARGE INTO THE ATMOSPHERE ANY VISIBLE AIR CONTAMINANTS OTHER THAN UNCOMBINED WATER VAPOR, FOR A PERIOD OR PERIODS AGGREGATING MORE THAN THREE MINUTES IN ANY ONE HOUR, WHICH ARE AS DARK OR DARKER THAN RINGELMANN NO. 1 OR EQUIVALENT TO OR GREATER THAN 20% OPACITY.

**AIR QUALITY
MANAGEMENT DISTRICT**

**AUTHORITY TO CONSTRUCT
(CONTINUED)**

A/C NO.: 99999

6. EMISSIONS FROM **KOMORI LS640 PRESS** SHALL NOT EXCEED THE FOLLOWING LIMIT:

POLLUTANT	MAXIMUM ALLOWABLE EMISSION LB/QUARTER
ROC	2,500

7. COMPLIANCE WITH THE EMISSION LIMITATION SPECIFIED IN CONDITION NO. 6 SHALL BE DETERMINED AS FOLLOWS:

$$\text{ROC EMISSIONS (LB/QUARTER)} = \frac{[\text{INKS AND COATING WT, LB/QUARTER}] \div (\text{DENSITY, LB/GAL}) + [\text{ADHESIVE, GAL/QUARTER}][\text{VOC, LB/GAL}] + [\text{FOUNTAIN SOLUTION, GAL/QTR}][\text{VOC, LB/GAL}] + [\text{MAKEUP AND CLEANUP SOLVENT, GAL/QUARTER}][\text{VOC, LB/GAL}]}{0.05}$$

THE VOLUME OF MATERIAL IN THE VOC IN THE ABOVE FORMULA INCLUDES WATER AND EXEMPT COMPOUNDS. A RETENTION FACTOR OF 95% APPLIES TO NON-HEATSET LITHOGRAPHIC INKS AND OIL-BASED COATINGS.

EQUIPMENT OPERATION

8. THE FOLLOWING GRAPHIC ARTS MATERIALS, WHEN USED IN THE **KOMORI LS640 PRESS**, SHALL HAVE A VOC CONTENT NOT TO EXCEED THE FOLLOWING LIMITS:

MATERIAL	VOC AS APPLIED EXCLUDING WATER AND EXEMPT COMPOUNDS GRAMS/LITER (LB/GAL)
INKS AND COATINGS	300 (2.5)
ADHESIVES	150 (1.25)

MATERIAL	VOC AS APPLIED INCLUDING WATER AND EXEMPT COMPOUNDS % VOC BY VOLUME
FOUNTAIN SOLUTIONS (A)	8

(A) STANDARD TO COMPLY WITH BEST AVAILABLE CONTROL TECHNOLOGY (BACT).

**AIR QUALITY
MANAGEMENT DISTRICT**

**AUTHORITY TO CONSTRUCT
(CONTINUED)**

A/C NO.: 99999

9. ALL VOC-CONTAINING MATERIALS USED FOR SOLVENT CLEANING IN THE **KOMORI LS640 PRESS** SHALL HAVE **EITHER** A VOC CONTENT **OR** VOC COMPOSITE PARTIAL PRESSURE NOT TO EXCEED THE FOLLOWING LIMITS:

MATERIAL	VOC AS APPLIED INCLUDING WATER AND EXEMPT COMPOUNDS GRAMS/LITER (LB/GAL)		VOC COMPOSITE PARTIAL PRESSURE MM HG @ 20°C (68°F)
GENERAL CLEANING (E.G. REPAIR, MAINTENANCE)	72 (0.6)		N/A
BLANKET AND ROLLER WASH (A)	300 (2.5)	OR	5
METERING ROLLER AND PRINTING PLATE CLEANER	300 (2.5)	OR	25
ULTRAVIOLET INKS (EXCEPT SCREEN PRINTING)	800 (6.7)	AND	33

(A) STANDARD TO COMPLY WITH BEST AVAILABLE CONTROL TECHNOLOGY (BACT).

10. USAGE OF THE FOLLOWING CLEANING SOLVENT AS A PERCENT OF TOTAL MONTHLY USAGE OF BLANKET AND ROLLER WASH SHALL NOT EXCEED THE FOLLOWING LIMIT:

MATERIAL	% USAGE
METERING ROLLER AND PRINTING PLATE CLEANER	15

11. ALL VOC-CONTAINING CLOTH OR PAPER USED FOR SURFACE PREPARATION OR CLEANUP SHALL BE STORED OR DISPOSED OF IN CLOSED CONTAINERS.

RECORDKEEPING

12. THE FOLLOWING RECORDS SHALL BE CONTINUOUSLY MAINTAINED ON-SITE FOR THE MOST RECENT FIVE-YEAR PERIOD AND SHALL BE MADE AVAILABLE TO THE AIR POLLUTION CONTROL OFFICER UPON REQUEST. MONTHLY AND QUARTERLY RECORDS AS SPECIFIED IN THE TABLE BELOW SHALL BE MADE AVAILABLE FOR INSPECTION WITHIN 30 DAYS FROM THE END OF THE MONTH AND QUARTER, RESPECTIVELY.

AIR QUALITY

MANAGEMENT DISTRICT

AUTHORITY TO CONSTRUCT

(CONTINUED)

A/C NO.: 99999

FREQUENCY	INFORMATION TO BE RECORDED
AT ALL TIMES	<p>LIST OF CURRENTLY USED MATERIALS, INCLUDING THE FOLLOWING INFORMATION:</p> <p>A. PRODUCT NAME, MANUFACTURER AND PRODUCT ID NUMBER OF ALL INKS, COATINGS, ADHESIVES, FOUNTAIN SOLUTIONS, AND MAKEUP, SURFACE PREPARATION AND CLEANUP SOLVENTS.</p> <p>B. VOC CONTENT OF EACH INK, COATING AND ADHESIVE AS-APPLIED EXCLUDING WATER AND EXEMPT COMPOUNDS (GRAMS/LITER, LB/GAL OR % VOC BY WEIGHT).</p> <p>C. VOC CONTENT OF EACH INK, COATING, ADHESIVE, FOUNTAIN SOLUTION AND SOLVENT AS APPLIED INCLUDING WATER AND EXEMPT COMPOUNDS (GRAMS/LITER, LB/GAL OR % VOC BY WEIGHT).</p> <p>D. DENSITY OF EACH INK AND COATING, IF APPLICABLE (LB/GAL)</p> <p>E. PERCENT VOC BY VOLUME OF EACH FOUNTAIN SOLUTION, IF APPLICABLE (% VOC).</p> <p>F. VOC COMPOSITE PARTIAL VAPOR PRESSURE OF EACH SOLVENT (MM HG @ 20°C).</p> <p>G. ACTUAL MIXING RATIO FOR EACH MATERIAL USED, IF APPLICABLE.</p>
DAILY	<p>TYPES AND QUANTITIES OF NON-COMPLIANT INKS, COATINGS, ADHESIVES, FOUNTAIN SOLUTIONS, AND MAKEUP, SURFACE PREPARATION AND CLEANUP SOLVENTS USED BY ANY PRINTING PRESS (LB OR GAL/DAY).</p>
MONTHLY	<p>A. TYPES AND QUANTITIES OF EACH INK, COATING, ADHESIVE, FOUNTAIN SOLUTION, AND MAKEUP, SURFACE PREPARATION AND CLEANUP SOLVENT USED BY THE KOMORI LS640 PRESS THAT COMPLY WITH THE VOC LIMITS SPECIFIED IN CONDITION NOS. 8 & 9 (LB OR GAL/MONTH).</p> <p>B. TYPES AND QUANTITIES OF EACH INK, COATING, ADHESIVE, FOUNTAIN SOLUTION, AND MAKEUP, SURFACE PREPARATION AND CLEANUP SOLVENT USED BY THE KOMORI LS640 PRESS EXCEEDING THE VOC LIMITS SPECIFIED IN CONDITION NOS. 8 & 9 (LB OR GAL/MONTH).</p> <p>C. PERCENTAGE USAGE OF METERING ROLLER AND PRINTING PLATE CLEANER TO TOTAL BLANKET AND ROLLER WASH SOLVENT (%), IF APPLICABLE.</p>
QUARTERLY	<p>CALCULATION OF ROC EMISSION FROM THE KOMORI LS640 PRESS BY THE METHOD SPECIFIED IN CONDITION NO. 7 (LB/QUARTER).</p>

**AIR QUALITY
MANAGEMENT DISTRICT**

**AUTHORITY TO CONSTRUCT
(CONTINUED)**

A/C NO.: 99999

START-UP

- 13. UPON INSTALLATION OF THE EQUIPMENT AUTHORIZED IN THIS AUTHORITY TO CONSTRUCT, THE OWNER/OPERATOR SHALL CONTACT THE SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT (SMAQMD) AT 916/874-4858 TO ARRANGE FOR A START-UP INSPECTION.
- 14. THIS AUTHORITY TO CONSTRUCT SHALL SERVE AS A TEMPORARY PERMIT TO OPERATE PROVIDED THAT:
 - A. THE SMAQMD HAS BEEN NOTIFIED FOR A START-UP INSPECTION,
 - B. THE EQUIPMENT INSTALLED MATCHES THE EQUIPMENT AUTHORIZED IN THE AUTHORITY TO CONSTRUCT, AND
 - C. THE EQUIPMENT IS OPERATED IN COMPLIANCE WITH ALL CONDITIONS LISTED WITHIN THE AUTHORITY TO CONSTRUCT.

YOUR APPLICATION FOR THIS AIR QUALITY AUTHORITY TO CONSTRUCT WAS EVALUATED FOR COMPLIANCE WITH SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT (AQMD), STATE AND FEDERAL AIR QUALITY RULES. THE FOLLOWING LISTED RULES ARE THOSE THAT ARE MOST APPLICABLE TO THE OPERATION OF YOUR EQUIPMENT. OTHER RULES MAY ALSO BE APPLICABLE.

<u>AQMD RULE NO.</u>	<u>RULE TITLE</u>
201	GENERAL PERMIT REQUIREMENTS
202	NEW SOURCE REVIEW
301	PERMIT FEES – STATIONARY SOURCE
401	RINGELMANN CHART
450	GRAPHIC ARTS OPERATIONS

IN ADDITION, THE CONDITIONS ON THIS AUTHORITY TO CONSTRUCT MAY REFLECT SOME, BUT NOT ALL, REQUIREMENTS OF THESE RULES. THERE MAY BE OTHER CONDITIONS THAT ARE APPLICABLE TO THE OPERATION OF YOUR EQUIPMENT. FUTURE CHANGES IN PROHIBITORY RULES MAY ESTABLISH MORE STRINGENT REQUIREMENTS WHICH MAY SUPERSEDE THE CONDITIONS LISTED HERE.

FOR FURTHER INFORMATION PLEASE CONSULT YOUR AQMD RULEBOOK OR CONTACT THE AQMD FOR ASSISTANCE.