INK, COATING and SOLVENT USAGE CHART – Rule 1130 (Lithographic/Letterpress)

COMPANY NAME: _____ PERMIT NUMBER: _____ PRESS, TYPE, NUMBER _____

ADDRESS: _____ PREPARED BY (Print Name): _____ % EFFICIENCY OF CONTROL EQUIPMENT _____

TELEPHONE NUMBER: (____) _____ SIGNATURE: _____ CONVERSION FACTORS:

PERIOD: FROM _____ THROUGH _____ 20 _____ TITLE: _____ 16 Fluid Oz = 1 Pint 4 Quarts = 1 Gallon 1 lb = 454 Grams

2 Pints = 1 Quart 1 Gallon = 3.785 Liters 1 lb/gal = 120 Grams/Liter

FORM 109 MUST BE COMPLETED WITH THIS CHART. SEE BACK PAGE OF THIS FORM FOR ADDITIONAL INSTRUCTIONS

	INK, VARNISH, COATING								THINNER/DILUENT						FOUNTAIN SOLUTION									
															ETCH VOC = ___ lb/gal		ALCOHOL VOC = ___ lb/gal		WATER				
DATE (MM/DD)	NAME, NUMBER, COLOR, TYPE	AMOUNT USED	DENSITY	VOC OF INK LESS WATER & LESS EXEMPT SOLVENT	VOC OF MATERIAL	LITHO GRAPHICS OIL IN INK	CURRENT SCAQMD EMISSION FACTOR	VOC	NAME	AMOUNT USED	VOC OF COATING LESS WATER & LESS EXEMPT SOLVENTS	VOC OF MATERIAL	VOC	DILUTED INK VOC LESS WATER & LESS EXEMPT SOLVENTS	AMOUNT USED	VOC	AMOUNT USED	VOC	AMOUNT USED	VOC OF MATERIAL	VOC	CLEAN-UP SOLVENTS TOTAL VOC EMISSIONS	TOTAL VOC EMISSIONS
(a)	(b)	(lb or gal) (c)	(lb/gal) (d)	(lb/gal) (e)	(lb/gal) (f)	% (wt) (g)	(h)	(lb) (i)	(j)	(gal) (k)	(lb/gal) (m)	(lb/gal) (n)	(lb) (o)	(lb/gal) (p)	(gal) (q)	(lb/gal) (r)	(gal) (s)	(lb) (t)	(gal) (u)	(lb/gal) (v)	(lb) (w)	(lb/day) (x)	(lb/day) (y)

INSTRUCTIONS for COATING, ADHESIVE and SOLVENT USAGE CHART (Form 109-1130a)

DEFINITION OF TERMS

Lithographic Printing is a plane-o-graphic method in which the image and nonimage areas are on the same plane.

Letterpress Printing is a method in which the image area is raised relative to the nonimage area and the ink is transferred to the paper directly from the image surface.

Ink is any fluid or viscous composition used in printing, impressing, or transferring an image onto a substrate.

Fountain Solution is the solution which is applied to the image plate to maintain the hydrophillic properties of the nonimage areas. It is primarily water mixed with an etchant, gum arabic, and a dampening aid.

DATE AND PRODUCTION INFORMATION:

(a) **DATE** – Record the date (MM/DD) when printing operation occured. If no printing operation occurred on a particular day, write the date and under column (b) write "NONE". If there is more than one day of no printing, write the inclusive dates and again "NONE" under column (b).

(b) **NAME, NUMBER, COLOR TYPE** – Separately write the name, number, color, and type of each ink, varnish or coating used.

(c) **AMOUNT USED** – Record the actual amount used and clearly identify the unit of measure for each item listed in (b), (lb or gal).

(d) **DENSITY** – Write the density of each material recorded under column (b) in units of lb/gal. This information will be used to calculate (i).

VOLATILE ORGANIC COMPOUND (VOC):

(e) **VOC OF INK, VARNISH, OR COATING LESS WATER and LESS EXEMPT SOLVENTS** – Enter the pounds of VOC in one gallon of material less water and less exempt solvents, (lb/gal).

(f) **VOC OF MATERIAL** – Enter the pounds of VOC in one gallon of the material, (lb/gal).

(g) **WEIGHT % LITHOGRAPHIC OIL IN INK** – This information can be obtained from the Material Satety Data Sheet (MSDS) from your supplier. It will be used to calculate (i).

(h) **CURRENT SCAQMD EMISSION FACTOR** – This factor can change at any time.
Currently the emission factors are:

Non-Heat Set---------- 0.05
Heat Set ---------- 0.80

(i) VOC EMISSION, (lb), Calculated as follows, either:

(1) (c) lb ÷ (d) lb/gal × (f) lb/gal × (h) = (i) lb, or
(2) (c) gal × (f) lb/gal × (h) = (i) lb, or
(3) (c) lb × (g) (%) × (h) = (i) lb

THINNER/DILUENT/OTHERS:

(j) If you thin or dilute any of the items listed in column (b), record the name of the thinner or diluent used on the same line you recorded the item under (b).

Record the name of the additive, e.g. "driers" and other VOC containing material used, e.g. blanket rejuvenators, "prep" solution, plate fix solution, separately under this column.

(k) Record the amount of thinner, diluent, additives, and other VOC containing material, (gal).

(m) **VOC of MATERIAL, LESS WATER and LESS EXEMPT SOLVENT**, (lb/gal)

(n) **VOC OF MATERIAL**, (lb/gal)

(o) **VOC EMISSION,** (lb) = (k) × (n)

(p) **VOC** content of **DILUTED INK** less water and less exempt solvent, (lb/gal). Use the equation which applies to the make-up of the diluted ink.

(1) If ink **has no water, no exempt solvents** and diluent is 100% VOC, and (c) is in gallons, then VOC of coating less water and exempt solvents,

(lb/gal):

$$= \frac{[(c)\ \text{gal} \times (f)] + (o)}{(c) + (k)}$$

(2) If ink **has water and/or exempt solvent**, diluent contains VOC, then VOC of coating less water and less exempt solvents, (lb/gal):

$$= \frac{[(c)\ \text{gal} \times (f)] + (o)}{\left[(c)\ \text{gal} \times \frac{(f)}{(e)}\right] + \left[\frac{(o)}{(m)}\right]}$$

FOUNTAIN SOLUTION:

ETCH: Record the VOC content of Etch, (lb/gal).

(q) Record the amount of etch used, (gal).

(r) (VOC) (lb) = (q), gal x VOC of Etch, lb/gal.

ALCOHOL: Record the VOC content of Alcohol, (lb/gal).

(s) Record the amount of alcohol used, (gal).

(t) **VOC** (lb) = (s) x VOC of Alcohol lb/gal.

(u) Record the amount of water used, (gal).

(v) **VOC CONTENT OF FOUNTAIN SOLUTION,** (lb/gal) $= \frac{(r) + (t)}{(q) + (s) + (u)}$

(w) **VOC EMISSION**, (lb) = (r) + (t)

(x) **CLEAN-UP SOLVENT TOTAL VOC EMISSIONS.** (lb/day) – Transfer the day's total VOC emissions from column "CS" on Form 109-CS (CLEANING/ CLEAN-UP SOLVENT USAGE CHART) into this column (x).

(y) TOTAL VOC EMISSIONS, (lg/day) = (i) + (o) + (w) + (x)

AIR POLLUTION CONTROL EQUIPMENT:

If this equipment is vented to an air pollution control device, record the % overall efficiency of the control equipment. The overall efficiency = the capture efficiency X the destruction efficiency. These two values must be obtained from the most recent District approved source test.

Multiply the applicable VOC emission terms by (1 - % overall efficiency) to calculate the total VOC in lbs/day, (y). Therefore, if (i), (o), (w) or (x) are vented to APC equipment, multiply the applicable terms by (1 - % overall efficiency). Sum these values and enter them into (y).

VOC reductions from use of APC equipment are based on the conditions established in the source test, e.g. inlet and outlet sites, and conditions for measuring VOC content.

NOTE: Daily usage records for the most recent two (2) year period shall be retained on the premises and be made available to the District representative during an inspection or upon request. Copies of these records shall be supplied to the District representative upon request.