## SUBPART FFF - Standards of Performance for Flexible Vinyl and Urethane Coating and Printing (Delegation Effective 3/19/87)

### RULE 260.580. APPLICABILITY AND DESIGNATION OF AFFECTED FACILITY

(a) The affected facility to which the provisions of this subpart apply is each rotogravure printing line used to print or coat flexible vinyl or urethane products.

(b) This subpart applies to any affected facility which begins construction, modification, or reconstruction after January 18, 1983.

(c) For facilities controlled by a solvent recovery emission control device, the provisions of Rule 260.584(a) requiring monitoring of operations will not apply until EPA has promulgated performance specifications under Appendix B for the continuous monitoring system. After the promulgation of performance specifications, these provisions will apply to each affected facility under Section (b) of this rule. Facilities controlled by a solvent recovery emission control device that become subject to the standard prior to promulgation of performance specifications must conduct performance tests in accordance with Rule 260.13(b) after performance specifications are promulgated.

### RULE 260.581. DEFINITIONS

All terms used in this subpart, not defined below, are given the same meaning as in the Act or in Subpart A of this Regulation.

(a) **"Emission Control Device"** means any solvent recovery or solvent destruction device used to control volatile organic compounds (VOC) emissions from flexible vinyl and urethane rotogravure printing lines.

(b) **"Emission Control System"** means the combustion of an emission control device and a vapor capture system for the purposes of reducing VOC emissions from flexible vinyl and urethane rotogravure printing lines.

(c) **"Flexible Vinyl and Urethane Products"** means those products, except for resilient floor coverings (1977 Standard Industry Code 3996) and flexible packaging, that are more than 50 micrometers (0.002 inches) thick, and that consist of or contain a vinyl or urethane sheet or a vinyl or urethane coated web.

(d) **"Gravure Cylinder"** means a plated cylinder with a printing image consisting of minute cells or indentations, specifically engraved or etched into the cylinder's surface to hold ink when continuously revolved through a fountain of ink.

(e) **"Ink"** means any mixture of ink, coating solids, organic solvents including dilution solvent, and water that is applied to the web of flexible vinyl or urethane on a rotogravure printing line.

(f) **"Ink Solids"** means the solids content of an ink as determined by Reference Method 24, ink manufacturer's formulation data, or plant blending records.

(g) **"Inventory System"** means a method of physically accounting for the quantity of ink, solvent, and solids used at one or more affected facilities during a time period. The system is based on plant purchase or inventory records.

(h) **"Plant Blending Records"** means those records which document the weight fraction of organic solvents and solids used in the formulation or preparation of inks at the vinyl or urethane printing plant where they are used.

(i) **"Rotogravure Print Station"** means any device designed to print or coat inks on one side of a continuous web or substrate using the intaglio printing process with a gravure cylinder.

(j) **"Rotogravure Printing Line"** means any number of rotogravure print stations and associated dryers capable of printing or coating simultaneously on the same continuous vinyl or urethane web or substrate, which is fed from a continuous roll.

(k) **"Vapor Capture System"** means any device or combination of devices designed to contain, collect, and route organic solvent vapors emitted from the flexible vinyl or urethane rotogravure printing line.

## RULE 260.582. STANDARD FOR VOLATILE ORGANIC COMPOUNDS

(a) On and after the date on which the performance test required by Rule 260.8 has been completed, each owner or operator subject to this subpart shall either:

(1) Use inks with a weighted average VOC content, averaged over any calendar month, or less than 1.0 kilogram VOC per kilogram ink solids at each affected facility, or

(2) Reduce VOC emissions to the atmosphere by 85 percent from each affected facility.

## RULE 260.583. TEST METHODS AND PROCEDURES

Performance tests shall be conducted as specified in Part 60, Chapter I, Title 40, Code of Federal Regulations (CFR), Section 60.583 (date of adoption). All symbols used in the equations to determine compliance shall have the meanings defined in Subsection 60.581(b) of Part 60, Chapter I, Title 40 CFR and Subpart A of this Regulation (Regulation X).

**RULE 260.584. MONITORING OF OPERATIONS AND RECORDKEEPING REQUIREMENTS**

(a) The owner or operator of an affected facility controlled by a solvent recovery emission control device shall install, calibrate, operate, and maintain a monitoring system which continuously measures and records the VOC concentration of the exhaust vent stream from the control device and shall comply with the following requirements:

(1) The continuous monitoring system shall be installed in a location that is representative of the VOC concentration in the exhaust vent, at least two equivalent stack diameters from the exhaust point, and protected from interferences due to wind, weather, or other processes.

(2) During the performance test, the owner or operator shall determine and record the average exhaust vent VOC concentration in parts per million by volume. After the performance test, the owner or operator shall determine and, in addition to the record made by the continuous monitoring device, record the average exhaust vent VOC concentration for each 3-hour clock period of printing operation when the average concentration is greater than 50 ppm and more than 20 percent greater than the average concentration value demonstrated during the most recent performance test.

(b) The owner or operator of an affected facility controlled by a thermal incineration emission control device shall install, calibrate, operate, and maintain a monitoring device that continuously measures and records the temperature of the control device exhaust gases and shall comply with the following requirements:

(1) The continuous monitoring device shall be calibrated annually and have an accuracy of $\pm$0.75 percent of the temperature being measured or $\pm 2.5\ ^{o}$ C, whichever is greater.

(2) During the performance test, the owner or operator shall determine and record the average temperature of the control device exhaust gases. After the performance test, the owner or operator shall determine and record, in addition to the record made by the continuous monitoring device, the average temperature for each 3-hour clock period of printing operation when the average temperature of the exhaust gases is more than $28^{o}$ C below the average temperature demonstrated during the most recent performance test.

(c) The owner or operator of an affected facility controlled by a catalytic incineration emission control device shall install, calibrate, operate, and maintain monitoring devices that continuously measure and record the gas temperatures both upstream and downstream of the catalyst bed and shall comply with the following requirements.

(1) Each continuous monitoring device shall be calibrated annually and have an accuracy of $\pm$0.75 percent of the temperature being measured or $\pm 2.5^{o}$ C, whichever is greater.

(2) During the performance test, the owner or operator shall determine and record the average gas temperature both upstream and downstream of the catalyst bed. After the performance test, the owner or operator shall determine and record, in addition to the record made by the continuous monitoring device, the average temperatures for each 3-hour clock period of printing operation when the average temperature of the gas stream before the catalyst bed is more than 28 $^{O}$C below the average temperature demonstrated during the most recent performance test or the average temperature difference across the catalyst bed is less than 80 percent of the average temperature difference of the device during the most recent performance test.

(d) The owner or operator of an affected facility shall record time periods of operation when an emission control device is not in use.

**RULE 260.585. REPORTING REQUIREMENTS**

(a) For all affected facilities subject to compliance with Rule 260.582, the performance test data and results from the performance test shall be submitted to the Control Officer as specified in Rule 260.8(a).

(b) The owner or operator of each affected facility shall submit semiannual reports to the Control Officer of occurrences of the following:

(1) Exceedances of the weighted average VOC content specified in Rule 260.582(a)(1);

(2) Exceedances of the average value of the exhaust vent VOC concentration as defined under Rule 260.584(a)(2);

(3) Drops in the incinerator temperature as defined in Rule 260.584(b)(2); and

(4) Drops in the average temperature of the gas stream immediately before the catalyst bed or drops in the average temperature across the catalyst bed as defined under Rule 260.584(c)(2).

(c) The reports required under Section (b) of this rule shall be postmarked within 30 days following the end of the second and fourth calendar quarters.

(d) The requirements of this subpart remain in force until and unless EPA, in delegating enforcement authority to the District under Section 111(C) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by the District. In that event, affected sources within the District will be relieved of the obligation to comply with this subpart, provided that they comply with requirements established by the District.