DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Air Quality Control Commission

REGULATION NUMBER 7

CONTROL OF OZONE VIA OZONE PRECURSORS AND CONTROL OF HYDROCARBONS VIA OIL AND GAS EMISSIONS

(EMISSIONS OF VOLATILE ORGANIC COMPOUNDS AND NITROGEN OXIDES)

5 CCR 1001-9

X. Use of Cleaning Solvents ~~for Degreasing and Cleaning~~

X.A. General Provisions

X.A.1. Applicability

The provisions of this section apply to cold cleaners, non-conveyorized vapor degreasers, ~~and~~ conveyorized degreasers, and industrial cleaning solvent operations. Open top vapor degreasers are a subset of non-conveyorized vapor degreasers. The owner or operator of a unit subject to this section shall ensure that no such unit is used unless the requirements of this section are satisfied. Section X.E. does not take effect until January 1, 2017.

X.A.2. Definitions

X.A.2.a. "Cold-Cleaner" means a container of non-aqueous liquid solvent held below its boiling point, which is designed, used, or intended for cleaning solid objects in a batch-loaded process. A "cold-cleaner" may have provisions for heating the solvent. It does not include vapor degreasers or continuously loaded conveyorized degreasers.

X.A.2.b. "Composite Partial Vapor Pressure" means the sum of the partial pressures of the VOC compounds in a solvent.

X.A.2.~~b~~c. "Conveyorized Degreaser" means an apparatus that performs degreasing or other cleaning functions through the use of non-aqueous liquid solvent and/or solvent vapors within a container, and which has a conveyor mechanism allowing continuous loading of items conveyed into and out of the solvent.

X.A.2.~~c~~d. "Freeboard" in a vapor degreaser means the vertical distance from the top of the vapor zone (as established by normal operations within the specifications of the degreaser manufacturer) to the top of the degreaser.

For cold-cleaners "freeboard" means the vertical distance from the surface of the solvent liquid to the top of the degreaser.

If all sides are not even, the vertical distance to the top of the lowest side shall be used to make the determination of freeboard.

X.A.2.~~d~~e. "Freeboard Ratio" means the ratio of the freeboard to the width of the solvent surface.

X.A.2.f. "Industrial Cleaning Solvent" means a VOC-containing liquid used to perform industrial cleaning solvent operations.

X.A.2.g. "Industrial Cleaning Solvent Operation" means the use of an industrial cleaning solvent for cleaning industrial operations such as spray gun cleaning, spray booth cleaning, large manufactured parts cleaning, equipment cleaning, floor cleaning, line cleaning, parts cleaning, tank cleaning, and small manufactured parts cleaning. Residential and janitorial cleaning are not considered industrial cleaning solvent operations.

X.A.2.~~e~~h. "Non-Conveyorized Vapor Degreaser" means an apparatus, which uses non-aqueous solvent vapors within some type of container to degrease or otherwise clean solid objects in a batch-loaded process. It excludes continuously loaded conveyorized degreasers.

X.A.2.i. "Residential and Janitorial Cleaning" means the cleaning of a building or building components including, but not limited to, floors, ceilings, wall, windows, doors, stairs, bathrooms, furnishings, and exterior surfaces of office equipment, excluding the cleaning of work areas where manufacturing or repair activity is performed.

X.A.2.~~f~~j. "Solvent Metal Cleaning" means the process of cleaning soils from metal surfaces by cold cleaning, conveyorized degreasing, or non-conveyorized vapor degreasing.

X.A.3. Transfer of waste solvent and used solvent

In any disposal or transfer of waste or used solvent, at least 80 percent by weight of the solvent/waste liquid shall be retained (i.e., no more than 20 percent of the liquid solvent/solute mixture shall evaporate or otherwise be lost during transfers).

X.A.4. Storage of waste solvent and used solvent

Waste or used solvent shall be stored in closed containers unless otherwise required by law.

X.A.5. Any control device shall meet the applicable requirements of Subsections IX.A.3.a, b, c, e and IX.A.8.a. and b.

X.B. Control of Solvent Cold-Cleaners

X.B.1. Control Equipment

X.B.1.a. Covers

X.B.1.a.(i) All cold-cleaners shall have a properly fitting cover.

X.B.1.a.(ii) Covers shall be designed to be easily operable with one hand under any of the following conditions:

X.B.1.a.(ii)(A) Solvent true vapor pressure is greater than 15 torr (0.3 psia) at 38^{o}C (100^{o}F).

X.B.1.a.(ii)(B) The solvent is agitated by an agitating mechanism.

X.B.1.a.(ii)(C) The solvent is heated.

X.B.1.b. Drainage Facility

X.B.1.b.(i) All cold-cleaners shall have a drainage facility that captures the drained liquid solvent from the cleaned parts.

X.B.1.b.(ii) For cold-cleaners using solvent which has a vapor pressure greater than 32 torr (0.62 psia) measured at 38°C (100°F) either:

X.B.1.b.(ii)(A) There shall be an internal drainage facility within the confines of the cold-cleaner, so that parts are enclosed under the (closed) cover to drain after cleaning, or if such a facility will not fit within;

X.B.1.b.(ii)(B) An enclosed, external drainage facility that captures the drained solvent liquid from the cleaned parts.

X.B.1.c. A permanent, clearly visible sign shall be mounted on or next to the cold-cleaner. The sign shall list the operating requirements.

X.B.1.d. Solvent spray apparatus shall not have a splashing, fine atomizing, or shower type action but rather should produce a solid, cohesive stream. Solvent spray shall be used at a pressure that does not cause excessive splashing.

For solvents with a true vapor pressure above 32 torr (0.62 psia) at 38°C (100°F), or, for solvents heated above 50°C (120°F), one of the following techniques shall be used:

X.B.1.d.(i) A freeboard ratio greater than or equal to 0.7.

X.B.1.d.(ii) A water or a non-volatile liquid cover. The cover liquid shall not be soluble in the solvent and shall not be more dense than the solvent and the depth of the cover liquid shall be sufficient to prevent the escape of solvent vapors.

X.B.2. Operating requirements

X.B.2.a. The cold-cleaner cover shall be closed whenever parts are not being handled within the cleaner confines.

X.B.2.b. Cleaned parts shall be drained for at least 15 seconds and/or until dripping ceases. Any pools of solvent shall be tipped out on the clean part back into the tank.

X.C. Control of Non-Conveyorized Vapor Degreasers

X.C.1. Control Equipment

X.C.1.a. The non-conveyorized vapor degreaser shall have a cover which shall be designed and operated so that it can be easily opened and closed through the use of mechanical assists such as spring loading, counterweights, etc.; opening and closing the cover shall not disturb the vapor zone.

X.C.1.b. Safety Switches

The following two types of switches shall be installed on vapor degreasers:

X.C.1.b.(i) Condenser flow switch and thermostat - (shuts off sump heat if the condenser coolant is either not circulating or is too warm); and

X.C.1.b.(ii) Spray safety switch - (shuts off spray pump if the vapor level drops more than four (4) inches).

X.C.1.c. Control Device

X.C.1.c.(i) For non-conveyorized vapor degreasers with an open area (with the cover open) of one square meter (10.8 ft_2) or less, either the freeboard ratio shall be greater than or equal to 0.75, or one of the control devices in (ii) below shall be used.

X.C.1.c.(ii) For non-conveyorized vapor degreasers with an open area (with the cover open) greater than one (1) square meter, (10.8 ft_2), at least one of the following control systems shall be used:

X.C.1.c.(ii)(A) Both a powered cover and a freeboard ratio greater than or equal to 0.75.

X.C.1.c.(ii)(B) A refrigerated chiller with a cooling capacity equivalent to or greater than the applicable specifications in Appendix C.

X.C.1.c.(ii)(C) An enclosed design: A system where the cover(s) or door(s) opens only when a dry part is entering or exiting the degreaser.

X.C.1.c.(ii)(D) A carbon adsorption system with ventilation greater than or equal to 15 cubic meters each minute per square meter (50 cfm/ft_2) of air/vapor area (when the cover(s) is [are] open), exhausting less than 25 parts per million (by volume) of solvent averaged over one complete adsorption cycle.

X.C.1.d. A permanent, clearly visible sign shall be mounted on or next to the degreaser. The sign shall list the operating requirements.

X.C.2. Operating Requirements

X.C.2.a. Keep cover closed at all times except when processing work loads into or out of the degreaser.

X.C.2.b. The following operations shall be performed to minimize solvent carry-out:

X.C.2.b.(i) Rack parts to allow full drainage.

X.C.2.b.(ii) Move parts as slowly as is practicable in and out of the degreaser. A maximum of one foot every five seconds by hand or a maximum of 5.5 cm/sec. (10.8ft/min) for a mechanically operated system.

X.C.2.b.(iii) Allow the workload to clean in the vapor zone at least 30 seconds or until condensation ceases.

X.C.2.b.(iv) Tip out any pools of solvent that remain on the cleaned parts before removal from the vapor zone.

X.C.2.b.(v) Allow parts to dry within the degreaser at least 15 seconds and/or until visually dry.

X.C.2.c. Solvents shall not be used to clean porous or absorbent materials; for example, cloth, leather, wood, rope, etc.

X.C.2.d. Work loads shall not occupy more than half of the degreaser's open top area.

X.C.2.e. Spraying shall not be done above the vapor level.

X.C.2.f. Solvent leaks shall be repaired immediately, or the degreaser shall be shut down.

X.C.2.g. Exhaust ventilation shall not exceed twenty (20) cubic meters per minute per square meter (65.6 cfm per sq. ft.) of degreaser open area, unless greater exhaust rates are necessary to meet Occupational and Safety Health Act requirements. Ventilation fans shall not be used near the degreaser opening, unless necessary to meet Occupational and Safety Health Act requirements.

X.C.2.h. The water separator shall function so that no visible water is present in the solvent exiting the separator.

X.D. Control of Conveyorized Degreasers

X.D.1. Control Equipment

X.D.1.a. Control Device

For all conveyorized degreasers with a solvent surface area greater than two (2) square meters (21.5 square feet), the degreasing shall be controlled by at least one of the following:

X.D.1.a.(i) Carbon adsorption system, with ventilation greater or equal to 15 cubic meters per minute per square meter (49.2 cf/m ft_2) of air/vapor interface for vapor degreasers (of air/liquid interface for non-vapor types) when down-time covers are open, and exhausting less than 25 parts per million of solvent (by volume) averaged over a complete adsorption cycle.

X.D.1.a.(ii) For vapor degreasers only: a refrigerated chiller with a cooling capacity equivalent to or greater than the applicable specifications in Appendix D.

X.D.1.b. Prevention of Carry-out

A drying tunnel, tumbling basket(s), or other demonstrably effective method(s) shall be employed to prevent cleaned parts from carrying out solvent liquid or vapor.

X.D.1.c. Safety Switches

X.D.1.c.(i) The following two (2) switch-circuits (or equivalent) shall be installed.

X.D.1.c.(i)(A) A spray safety switch shall shut off the spray pump and/or the conveyor if the vapor level drops more than four (4) inches.

X.D.1.c.(i)(B) A vapor level control thermostat shall shut off sump heat when the vapor level rises too high.

X.D.1.c.(ii) All conveyorized degreasers shall have a condenser thermostat and flow-detector switch (or equivalent) which shuts off sump heat if coolant is too warm or is not circulating.

X.D.1.d. Minimized Openings: Degreaser entrance and exit openings shall silhouette workloads so that the average clearance between parts (or parts-and the edge of the degreaser opening) is either:

X.D.1.d.(i) less than 10 centimeters (4 inches) or;

X.D.1.d.(ii) less than 10 percent of the width of the opening

X.D.1.e. Covers shall be provided to close off all the entrance(s) and exit(s) when the conveyor is not in use.

X.D.1.f. A permanent, clearly visible sign shall be mounted on or next to the degreaser. The sign shall list the operating requirements.

X.D.2. Operating Requirements

X.D.2.a. Exhaust ventilation shall not exceed 20 m^3/minute per square meter of degreaser opening (65.6 cf/m per square foot), unless necessary to meet OSHA requirements. Work place fans shall not be located near, nor directed at degreaser openings, unless necessary to meet OSHA requirements. Exhaust flow shall be measured by EPA reference methods 1 and 2 of 40 CFR Part 60.

X.D.2.b. Carry-out emissions shall be minimized by:

X.D.2.b.(i) Racking parts in such a manner to achieve best drainage.

X.D.2.b.(ii) Maintaining the vertical component of conveyor speed at less than 3.3 meters per minute (10.8 feet per minute).

X.D.2.c. Repair solvent leaks immediately, or shut down the degreaser.

X.D.2.d. The water separator shall function with an efficiency sufficient to prevent water from being visible in the solvent exiting the separator.

X.D.2.e. Down-time cover(s) shall be placed over entrances and exits of conveyorized degreasers immediately after the conveyor and exhaust are shut down. Covers shall be retained in position until immediately before start-up.

X.E. Control of Industrial Cleaning Solvent Operations

X.E.1. Control Requirements

The owner or operator of an industrial cleaning solvent operation whose total combined uncontrolled actual VOC emissions from the use of industrial cleaning solvents are equal to or greater than three (3) tons per year (excluding VOC emissions from solvents used for cleaning operations that are exempt under Section X.E.4.) must:

X.E.1.a. Limit the VOC content of cleaning solvents to less than or equal to 0.42 lb of VOC/gal (50 grams VOC/liter); or

X.E.1.b. Limit the composite partial vapor pressure of the cleaning solvent to 8 millimeters of mercury (mmHg) at 20 degrees Celsius (68 degrees Fahrenheit).

X.E.2. Operating Requirements

The owner or operator of an industrial cleaning solvent operation must implement the following operating requirements at all times to reduce VOC emissions from fugitive sources:

X.E.2.a. Cover open containers and used applicators;

X.E.2.b. Minimize air circulation around cleaning operations;

X.E.2.c. Properly dispose of used solvent and shop towels; and

X.E.2.d. Implement good air pollution control practices that minimize emissions, including, but not limited to, using only volumes necessary for cleaning and maintaining cleaning equipment to repair solvent leaks.

X.E.3. Recordkeeping Requirements

X.E.3.a. Keep annual records such as safety data sheets or other analytical data from the industrial cleaning solvent manufacturer showing the VOC type and VOC content and total amount of VOC-containing solvent used in solvent cleaning operations to demonstrate compliance with the control requirements of Section X.E.1.; and

X.E.3.b. Retain records for a period of two (2) years and make records available for inspection by the Division upon request.

X.E.4. Exemptions

Industrial cleaning solvent operations that are subject to an emissions control requirement in a federally enforceable New Source Performance Standard in 40 CFR Part 60, National Emission Standard for Hazardous Air Pollutants in 40 CFR Part 63, a Best Available Control Technology requirement of Regulation 3 Part B, a Lowest Achievable Emissions Reduction requirement of Regulation 3 Part D, or another federally enforceable requirement of Regulation 7 are not subject to Section X.E.

XIII. Graphic Arts and Printing

XIII.A. ~~General Provisions~~Packaging Rotogravure, Publication Rotogravure, and Flexographic Printing

XIII.A.1. Definitions

For the purpose of this section, the following definitions apply:

XIII.A.1.a. "Flexographic Printing" means the application of words, designs, and pictures to a substrate by means of a roll printing technique in which the pattern to be applied is raised above the printing roll and the image carrier is made of rubber or other elastometric materials.

XIII.A.1.b. "Packaging Rotogravure Printing" means rotogravure printing upon paper, paperboard, metal foil, plastic film, and other substrates, which are, in subsequent operations, formed into packaging products and labels for articles to be sold.

XIII.A.1.c. "Publication Rotogravure Printing" means rotogravure printing upon paper, which is subsequently formed into books, magazines, catalogues, brochures, directories, newspaper supplements, and other types of printed materials.

XIII.A.1.d. "Roll Printing" means the application of words, designs, and pictures to a substrate usually by means of a series of hard rubber or steel rolls each with only partial coverage.

XIII.A.1.e. "Rotogravure Printing" means the application of words, designs, and pictures to a substrate by means of a roll printing technique, which involves an intaglio or recessed image areas in the form of cells.

XIII.A.2. Applicability

XIII.A.2.a. This section applies to all packaging rotogravure, publication rotogravure, and flexographic printing facilities whose potential emissions of volatile organic compounds before control (determined at design capacity and 8760 hrs/year, or at maximum production, and accounting for any capacity or production limitations in a federally-enforceable permit) are equal to or more than 90,000 Kg per year (100 tons/year). Potential emissions are to be estimated by extrapolating historical records of actual consumption of solvent and ink. (e.g., the historical use of 20 gallons of ink for 4,000 annual hours would be extrapolated to 43.8 gallons for 8760 hours.)The before-control volatile organic compound emissions calculations shall be the summation of all volatile organic compounds in the inks and solvents (including cleaning liquids) used.

XIII.~~B~~A.3. Provisions for Specific Processes

XIII.~~B~~A.~~1~~3.a. No owner or operator of a facility subject to this section and employing VOC-containing ink shall operate, cause, allow, or permit the operation of the facility unless:

XIII.~~B~~A.~~1~~3.a.(i) The volatile fraction of ink, as it is applied to the substrate, contains 25.0 percent or less (by volume) of VOC and 75.0 percent or more (by volume) of water; or

XIII.BA.13.ba.(ii) The ink (minus water) as it is applied to the substrate, contains 60.0 percent or more (by volume) non-volatile material; or

XIII.BA.13.ea.(iii) The owner or operator installs and operates a control device and capture system in accordance with Paragraphs Sections XIII.AB.3.b.2. and XII.A.3.c.; or

XIII.BA.13.da.(iv) A combination of solvent-borne inks and low solvent inks that achieve a 70% (volume) overall reduction of solvent usage (compared to an all solvent borne ink usage) is used; or

XIII.BA.13.ea. (v) Flexographic and packaging rotogravure printing facilities limit emissions to 0.5 pounds of VOC per pound of solids in the ink. The limit includes all solvent added to the ink: solvent in the purchased ink, solvent added to cut the ink to achieve desired press viscosity, and solvent added to ink on the press to maintain viscosity during the press run. (Publication rotogravure facilities shall not use this option); or

XIII.BA.13.fa. (vi) Crossline averaging is used. The requirements of Section IX.A.5.d apply.

XIII.BA.23.b. A capture system shall be used in conjunction with the emission control system in Subparagraph Section XIII.BA.13.a. (above). The design and operation of a capture system shall be consistent with good engineering practice, and in conjunction with control equipment shall be required to provide for an overall reduction in volatile organic compound emissions of at least:

XIII.BA.23.ab.(i) 75.0 percent where a publication rotogravure process is employed;

XIII.BA.23.b.(ii) 65.0 percent where a packaging rotogravure process is employed; or

XIII.BA.23.cb.(iii) 60.0 percent where a flexographic printing process is employed.

XIII.BA.3.c. The design, operation, and efficiency of any capture system used in conjunction with any emission control system shall be certified in writing by the source owner or operator and approved by the Division. Testing of any capture system may be required by the Division on a case-by-case basis, in cases where a total enclosure is not used or when material balance results are questionable. Testing of capture system efficiency shall meet the requirements of Subsection IX.A.5.e.

XIII.BA.43.d. The overall reduction in VOC emissions specified in Subsection Section XII.AB.23.b. above shall be calculated by material balance methods approved by the Division, or by determination of capture and control device efficiencies. The overall VOC emission reduction rate equals the (percent capture efficiency X percent control device efficiency)/100.

XIII.CA.4. Testing and Monitoring

The owner or operator of a source subject to the requirements of this section is also subject to the requirements of Section IX.A.3., IX.A.7, IX.A.9, and IX.A.10. In Section IX.A.3., EPA reference method 24A shall be the test method used for publication rotogravure inks, while EPA Reference

method 24 data is acceptable for all other inks. Test methods as set forth in Appendix A, Part 60, Chapter I, Title 40, of the Code of Federal Regulations (CFR), in effect July 1, 1993.

XIII.~~D~~A.5. The owner or operator of a source subject to the requirements of this section is also subject to the requirements of Section IX.A.8. "A Guideline for Graphic Arts Calculations" shall be used for compliance determination.

XIII.B. Lithographic and Letterpress Printing

XIII.B.1. General Provisions

XIII.B.1.a. Definitions

XIII.B.1.a.(i) "Alcohol" means any of the hydroxyl-containing organic compounds with a molecular weight equal to or less than 74.12, which includes methanol, ethanol, propanol, and butanol.

XIII.B.1.a.(ii) "Alcohol substitute" means nonalcohol additives that contain VOCs and are used in the fountain solution to reduce the surface tension of water or prevent ink piling.

XIII.B.1.a.(iii) "Cleaning material" means a VOC-containing material used to remove ink and debris from the printing press area, operating surfaces of the printing press and, printing press parts. Blanket wash is a type of cleaning material.

XIII.B.1.a.(iv) "Fountain solution" means a mixture of water, nonvolatile printing chemicals, and a liquid additive that reduces the surface tension of the water so that it spreads easily across the printing plate surface. The fountain solution wets the non-image areas so that the ink is maintained within the image areas.

XIII.B.1.a.(v) "Heatset" means any printing operation where heat is required to evaporate ink oil from the printing ink.

XIII.B.1.a.(vi) "Lithographic printing" means a printing process where the image and non-image areas are chemically differentiated (the image area is oil receptive and the non-image area is water receptive). This printing process differs from other printing methods, where the image is a raised or recessed surface.

XIII.B.1.a.(vii) "Letterpress printing" means a printing process in which the image area is raised relative to the non-image area and the paste ink is transferred to the substrate directly from the image surface.

XIII.B.1.a.(viii) "Non-heatset" means any printing operation where the printing inks are set without the use of heat. For the purpose of Section XIII.B., ultraviolet-cured and electron beam-cured inks are considered non-heatset.

XIII.B.1.a.(ix) "Offset lithographic printing" means a printing process that transfers the ink film from the lithographic plate to an intermediary surface (blanket), which in turn transfers the ink film to the substrate.

XIII.B.1.a.(x) "Sheet-fed printing" means a printing process where individual sheets of paper or substrate are fed into the printing press.

XIII.B.1.a.(xi) "Web printing" means a printing process where continuous rolls of substrate material are fed to the press and rewound or cut to size after printing.

XIII.B.1.b. Applicability

XIII.B.1.b.(i) The work practice requirements in Section XIII.B.1.c. apply to all lithographic and letterpress printing operations.

XIII.B.1.b.(ii) The VOC content limit for inks in Section XIII.B.1.d. applies to lithographic and letterpress printing operations where total combined uncontrolled actual VOC emissions from each printing operation, including related cleaning materials and fountain solutions, are equal to or greater than three (3) tons per year, excluding heatset web offset and heatset web letterpress printing operations that comply with the control requirements in Section XIII.B.4.

XIII.B.1.b.(iii) The cleaning material requirements in Section XIII.B.2. apply to letterpress printing operations where total combined uncontrolled actual VOC emissions from each printing operation, including related cleaning materials and fountain solutions, are equal to or greater than three (3) tons per year.

XIII.B.1.b.(iv) The cleaning material and fountain solution requirements in Sections XIII.B.2. and XIII.B.3. apply to offset lithographic printing operations where total combined uncontrolled actual VOC emissions from each printing operation, including related cleaning materials and fountain solutions, are equal to or greater than three (3) tons per year.

XIII.B.1.b.(v) The control requirements in Section XIII.B.4. apply to heatset web offset lithographic and heatset web letterpress printing operations where total combined uncontrolled actual VOC emissions from each printing operation, including related cleaning materials and fountain solutions, are equal to ore greater than 25 tons per year.

XIII.B.1.c. Work Practice Requirements

Lithographic and letterpress printing operations must implement the following work practices at all times to reduce VOC emissions from fugitive sources:

XIII.B.1.c.(i) Cover open containers and keep solvent cleaning materials in closed containers when not in use;

XIII.B.1.c.(ii) Minimize air circulation where cleaning materials are being used;

XIII.B.1.c.(iii) Properly dispose of used cleaning materials, fountain solutions, and used shop towels; and

XIII.B.1.c.(iv) Implement good air pollution control practices that minimize emissions, including, but not limited to, using only volumes necessary for cleaning and maintain cleaning equipment to repair cleaning materials leaks.

XIII.B.1.d. VOC Content Limit for Inks

All lithographic and letterpress printing operations, excluding heatset web offset and heatset web letterpress printing operations that comply with the control requirement in Section XIII.B.4., must use low-VOC inks, which average less than 30% (by weight) VOC.

XIII.B.2. Offset lithographic printing and letterpress printing operations must comply with the following cleaning materials requirements;

XIII.B.2.a. All cleaning materials must contain less than 70% (by weight) VOC or have a VOC composite vapor pressure less than 10 mmHg at 20°C.

XIII.B.2.b. Exemptions

The following materials and operations are exempt from the cleaning material requirements in Section XIII.B.2.a.:

XIII.B.2.b.(i) Printing operations that use less than or equal to 110 gallons per year of non-compliant cleaning materials.

XIII.B.2.b.(ii) Cleaners used on electronic components of a press.

XIII.B.2.c.(iii) Pre-press cleaning operations.

XIII.B.2.c.(iv) Post-press cleaning operations.

XIII.B.2.c.(v) Floor cleaning supplies (other than those used to clean dried ink).

XIII.B.2.c.(vi) Cleaning performed in parts washers or cold cleaners that are subject to Section V.

XIII.B.3. Offset lithographic printing operations must comply with the following fountain solution requirements:

XIII.B.3.a. Heatset web offset lithographic printing operations must:

XIII.B.3.a.(i) Use a fountain solution containing 1.6% alcohol (by weight) or less;

XIII.B.3.a.(ii) Use a fountain solution containing 3% alcohol (by weight) or less if the fountain solution is refrigerated to below 60°F (15.5°C); or

XIII.B.3.a.(iii) Use a fountain solution containing 5% alcohol substitute (by weight) or less and no alcohol.

XIII.B.3.b. Sheet-fed printing operations must

XIII.B.3.b.(i) Use a fountain solution containing 5% alcohol (by weight) or less;

XIII.B.3.b.(ii) Use a fountain solution containing 8.5% alcohol (by weight) or less if the fountain solution is refrigerated to below 60°F (15.5°C); or

XIII.B.3.b.(iii) Use a fountain solution containing 5% alcohol substitute (by weight) or less and no alcohol.

XIII.B.3.b.(iv) The following are exempt from the fountain solution requirements in Section XIII.B.3.b.:

XIII.B.3.b.(iv)(A) Fountain solution use associated with a sheet-fed printing press with maximum sheet size 11x17 inches or smaller.

XIII.B.3.b.(iv)(B) Fountain solution use associated with a sheet-fed printing press having a total fountain solution reservoir less than one (1) gallon.

XIII.B.3.c. Non-heatset web printing must use a fountain solution containing 5% alcohol substitute (by weight) or less and no alcohol.

XIII.B.4. Heatset web offset lithographic and heatset web letterpress printing operations must comply with the following control requirements:

XIII.B.4.a. Heatset web offset lithographic and heatset web letterpress printing operations must control VOC emissions from heatset dryers by 90%.

XIII.B.4.b. If the control device was first installed on or after January 1, 2017, heatset web offset lithographic and heatset web letterpress printing operations must control VOC emissions from heatset dryers by 95%.

XIII.B.4.c. Where inlet VOC concentration is low and a 90 or 95% control efficiency is not achievable, heatset web offset lithographic and heatset web letterpress printing operations may reduce the control device outlet concentration to 20 ppmv (as hexane on a dry basis).

XIII.B.4.d. The following are exempt from the control requirements in Section XIII.B.4.:

XIII.B.4.d.(i) Heatset presses used for book printing.

XIII.B.4.d.(ii) Heatset presses with maximum web width of 22 inches or less.

XIII.B.4.d.(iii) Waterborne or radiation (ultra-violet or electron beam) cured materials that are not heatset.

XIII.B.5. Monitoring

For any add-on control device used to demonstrate compliance with Section XIII.B.4., owners and operators must install and operate equipment to continuously monitor parameters identified by the manufacturer's specifications that indicate proper control device operation.

XIII.B.6. Recordkeeping

Owners and operators of lithographic and letterpress printing operations subject to Sections XIII.B.1.d. and XIII.B.2.-.5. must keep the following records for two (2) years and make them available for inspection by the Division upon request.

XIII.B.6.a. Records demonstrating that a listed exemption to this Section XIII.B. applies.

XIII.B.6.b. If applicable, records of the type, alcohol content or alcohol substitute content, and total volume of fountain solution used in printing operations.

XIII.B.6.c. If applicable, records of the type, VOC content or composite vapor pressure, and total volume of the cleaning materials used in printing operations.

XIII.B.6.d. If applicable, records of the type, VOC content, and total volume of inks used in printing operations.

XIII.B.6.e. Records demonstrating compliance with the control requirements in Section XIII.B.4.