3745-21-22 **Control of volatile organic compound emissions from offset lithographic printing and letterpress printing facilities.**

[Comment: For dates and availability of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see paragraph (JJ) of rule 3745-21-01 of the Administrative Code titled "referenced materials."]

(A) Paragraphs (B) to (I) of this rule shall apply to each lithographic printing or letterpress printing facility that meets all the following criteria:

(1) The facility is located in Ashtabula, Butler, Clermont, Cuyahoga, Geauga, Hamilton, Lake, Lorain, Medina, Portage, Summit, or Warren county.

(2) The facility employs ~~letterpress printing or~~ one or more of the following ~~types of offset lithographic printing processes~~subject sources: ~~heatset web, non-heatset web or sheet-fed.~~

(a) Letterpress printing.

(b) Offset lithographic printing processes: heatset web, non-heatset web or sheet-fed.

(3) The facility has total actual VOC emissions, before the application of control systems and devices, from all lithographic or letterpress printing operations (including emissions from cleaning solutions used on lithographic or letterpress printing presses and fountain solutions) equal to or greater than three tons of VOCs per rolling twelve-month period.

(B) Exemptions.

(1) The following operations are exempt from the fountain solution requirements as contained in paragraph (D)(3)(b) of this rule:

(a) Any sheet-fed press with a maximum sheet size eleven by seventeen inches or smaller.

(b) Any press with a total fountain solution reservoir capacity of less than one gallon.

(2) The following operations are exempt from the requirement to install add-on controls as contained in paragraph (D)(1) of this rule:

(a) Any heatset web press with a maximum web width of 22.0 inches or less.

(b) Any heatset web press with potential VOC emissions from ink oil less than or equal to twenty-five tons per year before the application of controls.

(c) Any heatset web press used for book printing.

(C) Definitions.

The definitions applicable to this rule are contained in paragraphs (W) and (DD) of rule 3745-21-01 of the Administrative Code.

(D) VOC emissions control.

(1) Any person who owns or operates a subject heatset web offset lithographic or heatset web letterpress printing press with potential VOC ink oil emissions from the press dryer that are greater than twenty-five tons per year before the application of control systems and devices shall maintain the dryer air pressure lower than the pressroom air pressure at all times the press is operating and operate a control system that meets one of the following for that press:

(a) For a control system first installed before April 2, 2009 the control system shall reduce VOC emissions from each dryer by at least ninety per cent or maintain a maximum VOC outlet concentration of twenty ppmv, as hexane (C_6H_{14}) on a dry basis, whichever is less stringent.

(b) For a control system first installed on or after April 2, 2009, the control system shall reduce VOC emissions from each dryer by at least ninety-five per cent or maintain a maximum VOC outlet concentration of twenty ppmv as hexane (C_6H_{14}) on a dry basis, whichever is less stringent.

(2) Any person who owns or operates a subject heatset web offset lithographic printing press shall meet one of the following for the fountain solution used on that press:

(a) If the fountain solution contains only alcohol substitutes, maintain the as-applied VOC content of the fountain solution at or below 5.0 per cent, by weight, and use no alcohol in the fountain solution.

(b) If the fountain solution contains alcohol, either of the following:

(i) Maintain the as-applied VOC content of the fountain solution at or below 1.6 per cent, by weight.

(ii) Maintain the as-applied VOC content of the fountain solution at or below 3.0 per cent, by weight, and refrigerate the fountain solution to sixty degrees Fahrenheit or less.

(3) Any person who owns or operates a subject sheet-fed offset lithographic printing press shall meet one of the following for the fountain solution used on that press:

(a) If the fountain solution contains only alcohol substitutes, maintain the as-applied VOC content of the fountain solution at or below 5.0 per cent, by weight.

(b) If the fountain solution contains alcohol, either of the following:

(i) Maintain the as-applied VOC content of the fountain solution at or below 5.0 per cent, by weight.

(ii) Maintain the as-applied VOC content of the fountain solution at or below 8.5 per cent, by weight, and refrigerate the fountain solution to sixty degrees Fahrenheit or less.

(4) Anyone who owns or operates a subject non-heatset web offset lithographic printing press shall maintain the as-applied VOC content of the fountain solution used on that press at or below 5.0 per cent, by weight, and use no alcohol in the fountain solution.

(5) ~~Where it can be demonstrated to the satisfaction of the director that a subject offset lithographic printing press cannot be operated with fountain solutions meeting the limits in paragraph~~Paragraphs (D)(2), (D)(3), or (D)(4) of this rule ~~for reasons of technological or economic feasibility the permitting authority may establish site-specific limits based upon evidence of technological or economic infeasibility subject to approval by USEPA as a state implementation plan revision~~ are not applicable to any subject source where the director has established and USEPA has approved source-specific RACT.

(6) Any person who owns or operates a subject offset lithographic or letterpress printing press shall meet one of the following for each cleaning solution used for cleaning on that press:

(a) Maintain the as-applied VOC content at or below seventy per cent, by weight.

(b) Maintain the as-applied VOC composite partial vapor pressure at or below ten mm Hg at twenty degrees Celsius (sixty-eight degrees Fahrenheit).

The use of cleaning solutions that do not meet paragraphs (D)(6)(a) and (D)(6)(b) of this rule is permitted provided that the quantity used does not exceed one hundred ten gallons over any consecutive twelve-month period.

(7) Any person who owns or operates a subject offset lithographic or letterpress printing press shall keep all solvent containers closed at all times unless filling, draining, or performing cleanup operations.

(8) Any person who owns or operates a subject offset lithographic or letterpress printing press shall keep all solvent-laden shop towels in closed containers when not being used.

(E) Compliance dates.

(1) The owner or operator of an offset lithographic or letterpress printing facility that is subject to this rule shall comply with this rule no later than the following dates:

(a) For any subject offset lithographic or letterpress printing press located in Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, or Summit county for which installation commenced before April 2, 2009, the compliance date for the press is April 2, 2010.

(b) For any subject offset lithographic or letterpress printing press located in Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, or Summit county for which installation commenced on or after April 2, 2009, the compliance date for the press is the initial startup date of the press.

(c) For any subject offset lithographic or letterpress printing press located in Butler, Clermont, Hamilton or Warren county for which installation commenced before ~~the effective date of this rule~~March 27, 2022, the compliance date is either March 1, 2023 or the date of initial startup of the press, whichever is later.

(d) For any subject offset lithographic or letterpress printing press located in Butler, Clermont, Hamilton or Warren county for which installation commenced on or after ~~the effective date of this rule~~March 27, 2022, the compliance date is the date of initial startup of the press.

(2) The owner or operator of an offset lithographic or letterpress printing facility that is subject to this rule shall demonstrate compliance with paragraph (D)(1) of this rule by testing the control device on each subject offset lithographic

or letterpress printing press in accordance with paragraph (F)(1) of this rule according to the following:

(a) For any offset lithographic or letterpress printing facility subject to paragraph (E)(1)(a) or (E)(1)(c) of this rule, by no later than ninety days after the press's compliance date. In addition, the Ohio EPA may accept the results of an emission test conducted prior to ~~April 2, 2009~~the compliance date indicated in paragraph (E)(1) of this rule, if the owner or operator provides information and data to the Ohio EPA which demonstrate that an approved USEPA emission test method was employed, that the operation of the press was consistent with the current operating conditions and operating capacity, and that if the Ohio EPA had requested to witness the test, the test was witnessed by the Ohio EPA or local air agency.

(b) For any offset lithographic or letterpress printing facility subject to paragraph (E)(1)(b) or (E)(1)(d) of this rule, within one hundred eighty days after the press's compliance date.

(3) Additional testing of a subject offset lithographic or letterpress printing press and the VOC emission control system in accordance with paragraph (F)(1) of this rule may be required by the director to ensure continued compliance.

(F) Compliance test methods.

(1) For any heatset web offset lithographic or heatset web letterpress printing press that is subject to paragraph (D)(1) of this rule, compliance shall be determined by performing emission tests in accordance with the following:

(a) For the purpose of demonstrating compliance with the emission control requirements paragraph (D)(1) of this rule, the affected source shall be run at typical operating conditions and flow rates compatible with scheduled production during any emission testing.

(b) The negative dryer pressure shall be established during the initial test using an airflow direction indicator, such as a smoke stick or aluminum ribbons, or differential pressure gauge. Capture efficiency and continuous dryer air flow monitoring is not required.

(c) The following USEPA test methods (in 40 CFR part 60, appendix A) shall be used to demonstrate compliance with the applicable emission control requirement in paragraph (D)(1) of this rule:

(i) USEPA method 1 or 1A, as appropriate, ~~shall be used~~ to select the sampling sites.

(ii) USEPA method 2, 2A, 2C, or 2D, as appropriate, ~~shall be used~~ to determine the velocity and volumetric flow rate of the exhaust stream.

(iii) USEPA method 3 or 3A, as appropriate, ~~shall be used~~ to determine the concentration of O_2 and CO_2.

(iv) USEPA method 4 ~~shall be used~~ to determine moisture content.

(v) USEPA method 18, 25, or 25A ~~shall be used~~ to determine the VOC concentration of the exhaust stream entering and exiting the control device, unless the alternate limit of twenty ppmv as specified in paragraphs (D)(1)(a) and (D)(1)(b) of this rule is being met, in which case only the VOC concentration of the exit exhaust shall be determined. In cases where the anticipated outlet VOC concentration of the control device is less than fifty ppmv as carbon, USEPA method 25A shall be used.

(a) If the average concentrations in the outlet of a thermal or catalytic oxidizer measured by USEPA method 25A are found to be greater than fifty ppmv as carbon, USEPA method 18 or 25 may be used to determine non-VOC components (methane and ethane) to correct the outlet VOC readings, unless the director determines that the uncorrected USEPA method 25A results are acceptable.

(b) A compliance test shall consist of up to three separate runs, each lasting a minimum of sixty minutes, unless the director determines that process variables dictate shorter sampling times.

(c) USEPA method 25 specifies a minimum probe temperature of two hundred sixty-five degrees Fahrenheit. To prevent condensation, the probe should be heated to at least the gas stream temperature, typically close to three hundred fifty degrees Fahrenheit.

(d) USEPA method 25A specifies a minimum temperature of two hundred twenty degrees Fahrenheit for the sampling components leading to the analyzer. To prevent condensation

when testing heatset web offset presses, the sampling components and flame ionization detector block should be heated to at least the gas stream temperature, typically close to three hundred fifty degrees Fahrenheit.

(e) The use of an adaptation to any of the analytical methods specified above shall be approved by the director and USEPA on a case-by-case basis. The owner or operator shall submit sufficient documentation for the director and USEPA to find that the analytical methods specified above will yield inaccurate results and that the proposed adaptation is appropriate.

(2) For any offset lithographic printing press that is subject to paragraph (D)(2), (D)(3), or (D)(4) of this rule, compliance with the VOC content of the as-applied fountain solution shall be determined by one of the methods in paragraphs (F)(2)(a) to (F)(2)(c) of this rule except when paragraph (F)(2)(d) is applicable:

(a) USEPA method 24 shall be used to determine the VOC content of the as-applied fountain solution.

(b) If diluted prior to use, a calculation shall be performed for VOC content that combines USEPA method 24 analytical data for the concentrated materials used to prepare the as-applied fountain solution and the proportions in which they are mixed to make the as-applied fountain solution. The analysis of the concentrated material may be performed by the supplier of that material. The analytical data may be derived from a material safety data sheet (MSDS) or equivalent information from the supplier as long as it is based on USEPA method 24 results.

(c) If not diluted prior to use, the owner or operator shall use formulation information provided by the supplier, such as a MSDS sheet or equivalent information from the supplier. In the event of a dispute between information provided by the supplier and data obtained by USEPA method 24, the data obtained by USEPA method 24 shall be employed.

(d) For any offset lithographic printing press that is subject to paragraph (D)(2)(b) or (D)(3)(b) of this rule, when adding alcohol to a fountain solution batch previously tested in accordance with one of the compliance test methods contained in paragraphs (F)(2)(a) to (F)(2)(c) of this rule, in lieu of the methods in paragraphs (F)(2)(a) to (F)(2)(c) of this rule, the owner or operator shall determine the VOC (alcohol) content of the altered fountain solution using a hydrometer.

(3) For any offset lithographic printing press that is subject to the fountain solution temperature requirements of paragraph (D)(2)(b)(ii) or (D)(3)(b)(ii) of this rule, a thermometer or other temperature detection device capable of reading to 0.5 degrees Fahrenheit shall be used to ensure that any refrigerated fountain solution reservoirs are maintained at or below sixty degrees Fahrenheit at all times.

(4) For any offset lithographic or letterpress printing press that is subject to paragraph (D)(6)(a) of this rule, the VOC content of cleaning solutions shall be determined by one of the following methods:

(a) USEPA method 24 shall be used to determine the VOC content of the cleaning solution.

(b) If diluted prior to use, a calculation shall be performed for VOC content that combines USEPA method 24 analytical data for the concentrated materials used to prepare the cleaning solution and the proportions in which they are mixed to make the as-applied cleaning solution. The analysis of the concentrated material may be performed by the supplier of that material. The analytical data may be derived from a material safety data sheet (MSDS) or equivalent information from the supplier as long as it is based on USEPA method 24 results.

(c) If not diluted prior to use, the owner or operator shall use formulation information provided by the supplier, such as MSDS sheet or equivalent information from the supplier. In the event of a dispute between information provided by the supplier and data obtained by USEPA method 24, the data obtained by USEPA method 24 shall be employed.

(5) For any offset lithographic or letterpress printing press that is subject to paragraph (D)(6)(b) of this rule, the VOC composite partial vapor pressure of cleaning solutions shall be determined by one of the following methods:

(a) If diluted prior to use, calculate the VOC composite vapor pressure of the as-applied solvent by using the formula for "VOC composite vapor pressure" as follows:

(i) Determine the identity and quantity of each compound in a blended organic solvent by using ASTM D2306-00, or by using ASTM E260-96(2011) for organics and ASTM D3792-05(2009) for water content, if applicable, or the manufacturer's product formulation data.

(ii) Determine the vapor pressure of each pure VOC component by using ASTM D2879-10 or publications such as "Perry's Chemical Engineer's Handbook", "CRC Handbook of Chemistry and Physics", or "Lange's Handbook of Chemistry."

(iii) Calculate the VOC composite partial pressure of the solvent by using the formula for "VOC composite partial pressure." For the purpose of this calculation, the blended solvent shall be assumed to be an ideal solution where "Raoult's Law" applies. The partial vapor pressures of each compound at twenty degrees Celsius (sixty-eight degrees Fahrenheit) shall be used in the formula. The VOC composite partial pressure shall be calculated as follows:

$$PP_c = \sum_{i=1}^{n} \frac{(W_i)(VP_i)/MW_i}{\frac{W_w}{MW_w} + \frac{W_e}{MW_e} + \sum_{i=1}^{n} \frac{W_i}{MW_i}}$$

Where:

Wi = Weight of the "i"th VOC compound, in grams.

Ww = Weight of water, in grams.

We = Weight of exempt compound, in grams.

MWi = Molecular weight of the "i"th VOC compound, in grams per gram-mole.

MWw = Molecular weight of water, in grams per gram-mole.

MWe = Molecular weight of the "e"th exempt compound, in grams per gram-mole.

PPc= VOC composite partial vapor pressure at twenty degrees Celsius (sixty-eight degrees Fahrenheit), in mmHg.

VPi = Vapor pressure of the "i"th VOC compound at twenty degrees Celsius (sixty-eight degrees Fahrenheit), in mmHg.

(b) If not diluted prior to use, the owner or operator shall use formulation information provided by the supplier, such as a material safety data sheet (MSDS) or equivalent information from the supplier as long as it is based on results determined in accordance with the procedure under paragraph (F)(5)(a) of this rule.

(G) Monitoring and recordkeeping.

(1) The owner or operator of an offset lithographic or letterpress printing press that is subject to the control requirements specified in paragraph (D)(1) of this rule, shall install and operate continuous temperature monitoring and recording equipment that measures and records temperature data at least once every fifteen minutes, and shall collect and record the following information and maintain the information at the facility for a period of five years:

(a) A log or record of any time when the control device or monitoring equipment is not in operation when any associated press is in operation.

(b) For thermal oxidizers all three-hour periods of operation during which the average combustion temperature was more than fifty degrees Fahrenheit below the average combustion temperature during the most recent emission test that demonstrated that the press was in compliance.

(c) For catalytic oxidizers all three-hour periods of operation during which the average temperature of the dryer exhaust gases immediately before the catalyst bed was more than fifty degrees Fahrenheit below the average temperature of the dryer exhaust gases during the most recent emission test that demonstrated that the press was in compliance.

(d) For catalytic oxidizers, the catalyst bed material shall be inspected annually for general catalyst condition and any signs of potential catalyst depletion. The owner or operator shall also collect a representative sample of the catalyst from the oxidizer, per manufacturer's recommendations, and have it tested to evaluate the catalyst's capability to continue to function at or above the required control efficiency. An evaluation of the catalyst bed material shall be conducted whenever the results of the inspection indicate signs of potential catalyst depletion or poor catalyst condition based on manufacturer's recommendations, but not less than once per year.

(2) The owner or operator of a heatset web or sheet-fed offset lithographic printing press subject to paragraph (D)(2)(b) or (D)(3)(b) of this rule shall measure the following:

(a) In accordance with paragraph (F)(2)(d) of this rule, the VOC (alcohol) content, in per cent by weight, of any altered fountain solution employed in the press, measured at the time of alteration. The owner or operator shall maintain records of the results of the measurements at the facility for a period of five years. The alcohol content of the fountain solution shall be measured using a hydrometer. The hydrometer shall have a visual, analog, or digital readout with an accuracy of 0.5 per cent; and a standard solution shall be used to calibrate the hydrometer for the type of alcohol used in the fountain solution.

(b) If the owner or operator refrigerates the fountain solution in accordance with paragraph (D)(2)(b)(ii) or (D)(3)(b)(ii) of this rule, the temperature of the fountain solution, in degrees Fahrenheit, measured on a daily basis. The owner or operator shall maintain records of the results of the measurements at the facility for a period of five years.

(3) The owner or operator of a subject offset lithographic printing press shall maintain records, for a period of five years, of one of the following for fountain solution preparation:

(a) For an owner or operator maintaining a recipe log for each batch of fountain solution prepared for use in the press:

(i) A recipe log that identifies all recipes used to prepare the as-applied fountain solution. Each recipe shall be maintained in the recipe log for a period of five years from the date the recipe was last prepared for a press. Each recipe shall clearly identify the following:

(a) VOC content of each concentrated alcohol substitute, added to make the batch of fountain solution, based upon the manufacturer's laboratory analysis using USEPA method 24.

(b) The proportions in which the fountain solution is mixed, including the addition of alcohol or water. The proportion may be identified as a volume when preparing a discrete batch or may be identified as the settings when an automatic mixing unit is employed.

(c) The calculated VOC content of the final, mixed recipe.

(ii) Identification of the recipe used to prepare each batch of fountain solution for use in the press.

(iii) The date and time when the batch was prepared.

(iv) An affirmation the batch was prepared in accordance with the recipe.

(b) For an owner or operator not maintaining a recipe log in accordance with paragraph (G)(3)(a) of this rule, for each batch of fountain solution prepared for use in the press:

(i) The volume and VOC content of each concentrated alcohol substitute, added to make the batch of fountain solution, based upon the manufacturer's laboratory analysis using USEPA method 24.

(ii) The volume of alcohol added to make the batch of fountain solution.

(iii) The volume of water added to make the batch of fountain solution.

(iv) The calculated VOC content of the final, mixed batch.

(v) The date and time the batch was prepared.

For purposes of paragraphs (G)(3)(a) and (G)(3)(b) of this rule, a fountain solution that is continuously blended with an automatic mixing unit is considered to be the same batch until such time that the recipe or mix ratio is changed.

(4) The owner or operator of a subject offset lithographic or letterpress printing press shall maintain records, for a period of five years, of one of the following for all cleaning solutions employed in all the offset lithographic and letterpress printing operations:

(a) For an owner or operator maintaining a recipe log for each batch of cleaning solution prepared:

(i) A recipe log that identifies all recipes used to prepare the as-applied cleaning solution~~. Each recipe shall be~~, with each recipe maintained in the recipe log for a period of five years from the date the recipe was last prepared. Each recipe shall clearly identify one of the following:

(a) The VOC content of each cleaning solution, based upon the manufacturer's laboratory analysis using USEPA method 24.

(b) The VOC composite partial vapor pressure of each cleaning solution, based upon the method under paragraph (F)(5) of this rule.

(ii) Identification of the recipe used to prepare each batch of cleaning solution.

(iii) The date and time when the batch was prepared.

(iv) An affirmation the batch was prepared in accordance with the recipe.

(b) For an owner or operator not maintaining a recipe log in accordance with paragraph (G)(5)(a) of this rule, for each batch of cleaning solution prepared, records of the VOC content or VOC composite partial vapor pressure and the date and time the batch was prepared.

(5) The owner or operator of a subject offset lithographic or letterpress printing press shall maintain monthly records of the following information:

(a) The total amount, in gallons, of all the cleaning solutions employed.

(b) The total amount, in gallons, of all the cleaning solutions employed that exceeds the allowable VOC content or VOC composite vapor pressure.

(H) Reporting of monitoring and recordkeeping information.

The owner or operator of an offset lithographic or letterpress printing facility that is subject to this rule shall notify the director of any of the following exceedances of applicable requirements. Each notification shall be submitted to the director within forty-five days after the instance occurs, and the notification shall include a copy of the record showing the instance.

(1) If determining alcohol content via hydrometer measurement, each hydrometer measurement that shows an exceedance of the applicable alcohol content limitation specified in paragraph (D)(2)(a), (D)(2)(b), (D)(3)(a), or (D)(3)(b) of this rule.

(2) If complying via refrigerated fountain solution, each temperature reading that shows an exceedance of the temperature limitation specified in paragraph (D)(2)(b) or (D)(3)(b) of this rule.

(3) Each calculated VOC content that exceeds the VOC content limitation specified in paragraph (D)(2)(b), (D)(3)(b), or (D)(4) of this rule.

(4) Each instance when an exceedance of the VOC content or VOC composite partial vapor pressure specified in paragraph (D)(6) of this rule for cleaning solutions occurs.

(5) All three-hour blocks of time during which the average combustion temperature within the thermal oxidizer was below the temperature limitation specified in paragraph (G)(1)(b) of this rule.

(6) All three-hour blocks of time when the emissions unit was in operation during which the average temperature of the exhaust gases immediately before the catalyst bed was below the temperature limitations specified paragraph (G)(1)(c) of this rule.

(I) Retention factors and capture efficiencies.

For purposes of determining VOC emissions from offset lithographic printing operations, the following retention factors and capture efficiencies shall be used:

(1) A portion of the VOC contained in inks and cleaning solution is retained in the printed web or in the shop towels used for cleaning. The following retention factors shall be used:

(a) A twenty per cent VOC retention factor shall be used for heatset inks printed on absorptive substrates, meaning eighty per cent of the VOC in the ink is emitted during the printing process and is available for capture and control by an add-on pollution control device.

(b) A ninety-five per cent VOC retention factor shall be used for sheet-fed and non-heatset web inks printed on absorptive substrates, meaning five per cent of the VOC in the ink is emitted during the printing process.

(c) A fifty per cent VOC retention factor shall be used for cleaning solution VOC in shop towels for cleaning solutions with a VOC composite vapor pressure of no more than ten mmHg at twenty degrees Celsius (sixty-eight degrees Fahrenheit) if the contaminated shop towels are kept in closed containers, meaning fifty per cent of the VOC used on the shop towels is emitted during the cleaning process.

(2) A portion of the VOC contained in inks, fountain solutions, and automatic blanket washes on heatset web presses is captured in the press dryer for control by add-on pollution control devices. The following capture efficiencies shall be used:

(a) A one hundred per cent VOC carry over efficiency shall be used for inks. All the VOC in the ink that is not retained is assumed to be volatilized in the

press dryer. Capture efficiency testing for heatset dryers is not required if it is demonstrated that pressure in the dryer is negative relative to the surrounding press room and the airflow is into the dryer.

(b) A seventy per cent VOC carry over efficiency shall be used for fountain solutions containing alcohol substitutes.

(c) A forty per cent VOC carry over efficiency shall to be used for automatic blanket wash solutions with a VOC composite vapor pressure of no more than ten mmHg at twenty degrees Celsius (sixty-eight degrees Fahrenheit).

(J) Applicability notification, compliance certification, and permit application.

(1) The owner or operator of an offset lithographic or letterpress printing facility that is subject to this rule, is located in located in Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, or Summit county, and has an initial startup of an offset lithographic or letterpress printing press before April 2, 2009 shall notify the appropriate Ohio EPA district office or local air agency in writing that the offset lithographic or letterpress printing press is subject to this rule not later than June 1, 2009, ~~(~~or within sixty days after the offset lithographic or letterpress printing press becomes subject to this rule~~)~~, providing the information specified in paragraph (J)(5) of this rule.

(2) The owner or operator of an offset lithographic or letterpress printing facility that is subject to this rule, is located in Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, or Summit county, and has an initial startup of an offset lithographic or letterpress printing press on or after April 2, 2009 shall notify the appropriate Ohio EPA district office or local air agency in writing that the offset lithographic or letterpress printing press is subject to this rule not later than either the date of initial startup of the offset lithographic or letterpress printing press or June 1, 2009, ~~(~~whichever is later~~)~~, providing the information specified in paragraph (J)(5) of this rule. The application for a permit-to-install under rule 3745-31-02 of the Administrative Code may be used to fulfill the notification requirements of this paragraph.

(3) The owner or operator of an offset lithographic or letterpress printing facility that is subject to this rule, is located in Butler, Clermont, Hamilton or Warren county, and has an initial startup of an offset lithographic or letterpress printing press before ~~the effective date of this rule~~March 27, 2022 shall notify the appropriate Ohio EPA district office or local air agency in writing that the offset lithographic or letterpress printing press is subject to this rule not later than May 26, 2022, or within sixty days after the ~~effective date of this rule~~offset

lithographic or letterpress printing press becomes subject to this rule, providing the information specified in paragraph (J)(5) of this rule.

(4) The owner or operator of an offset lithographic or letterpress printing facility that is subject to this rule, is located in Butler, Clermont, Hamilton or Warren county, and has an initial startup of an offset lithographic or letterpress printing press on or after ~~the effective date of this rule~~March 27, 2022 shall notify the appropriate Ohio EPA district office or local air agency in writing that the offset lithographic or letterpress printing press is subject to this rule not later than either the date of initial startup of the offset lithographic or letterpress printing press or ~~sixty days after the effective date of this rule~~May 26, 2022 , ~~(~~whichever is later~~)~~, providing the information specified in paragraph (J)(5) of this rule. The application for a permit-to-install under rule 3745-31-02 of the Administrative Code may be used to fulfill the notification requirements of this paragraph.

(5) The notification required in paragraphs (J)(1) to (J)(4) of this rule shall provide the following information:

(a) Name and address of the owner or operator.

(b) Address (i.e., physical location) of the offset lithographic printing or letterpress printing facility.

(c) Equipment description and Ohio EPA application number (if assigned) of the offset lithographic or letterpress printing press.

(d) Identification of the VOC emission requirement, the means of compliance, and the compliance date for the offset lithographic or letterpress printing press.

(e) An application for an operating permit or an application for a modification to an operating permit in accordance with Chapter 3745-77 of the Administrative Code (for sources subject to the Title V permit program) or an application for a permit-to-install and operate or an application for a modification to a permit-to-install and operate in accordance with Chapter 3745-31 of the Administrative Code (for sources not subject to the Title V permit program) for each subject process that meets one of the following:

(i) The process does not possess an effective operating permit or permit-to-install and operate.

(ii) The process possesses an effective operating permit or permit-to-install and operate and the owner or operator cannot certify in

writing to the director that such subject process is in compliance with this rule. An application for an operating permit or permit-to-install and operate is not required provided the subject process is operating under an effective permit and certifies compliance. Such certification shall include all compliance certification requirements under paragraph (J)(6) of this rule.

(6) Compliance certification.

(a) The owner or operator of an offset lithographic or letterpress printing facility that is subject to this rule shall notify the Ohio EPA district office or local air agency in writing within thirty days following the completion of any of the following:

(i) For an offset lithographic or letterpress printing press subject to the VOC emission requirements in paragraphs (D)(2) to (D)(8) of this rule, the first documented achievement of compliance with each of the requirements.

(ii) For an offset lithographic or letterpress printing press subject to the VOC emission control requirement in paragraph (D)(1) of this rule, the following:

(a) The completion of installation and initial use of a VOC emission control system for the offset lithographic or letterpress printing press.

(b) The completion of installation and initial use of any monitoring devices required under paragraph (G) of this rule for the offset lithographic printing press.

(c) The completion of any compliance testing conducted in accordance with paragraph (F) of this rule to demonstrate compliance with the applicable control requirement.

(b) The compliance certification under paragraph (J)(6)(a) of this rule shall provide the following, where applicable:

(i) A description of the requirements.

(ii) A description of the VOC emission control system.

(iii) A description of the monitoring devices.

(iv) A description of the records that document continuing compliance.

(v) The results of any compliance tests, including documentation of test data.

(vi) The results of any records that document continuing compliance, including calculations.

(vii) A statement by the owner or operator of the offset lithographic or letterpress printing facility as to whether the offset lithographic or letterpress printing press has complied with the requirements.

(K) Requirements for an owner or operator of an offset lithographic or letterpress printing facility that determines the facility is not subject to one or more of the control requirements in paragraph (D) of this rule.

(1) When establishing that the facility's total actual VOC emissions, before the application of control systems and devices, from all lithographic or letterpress printing operations (including emissions from cleaning solutions used on lithographic or letterpress printing presses and fountain solutions) are less than three tons of VOCs per rolling twelve-month period and, therefore, the facility is not subject to the add-on control, cleaning solvent and fountain solution requirements in paragraphs (D)(1) to (D)(8) of this rule, the owner or operator shall maintain one of the following records:

(a) Monthly records of material usage demonstrating the following thresholds have not been exceeded:

Type of Letterpress or Offset Lithographic Printing Operation	12-Month Rolling Threshold
Sheet-fed only	768 gallons of cleaning solvent and fountain solution additives
Non-heatset Web only	768 gallons of cleaning solvent and fountain solution additives
Combination of Sheet-fed and Non-heatset Web	768 gallons of cleaning solvent and fountain solution additives.
Heatset Web only	5400 pounds of ink, cleaning solvent and fountain solution additives

A facility that employs a combination of printing technologies that includes a heatset web offset lithographic printing press may not use this option for demonstrating actual emissions are less than three tons of VOCs per rolling twelve-month period.

(b) The following monthly records and calculations demonstrating actual emissions did not equal or exceed three tons of VOCs per rolling twelve-month period:

(i) The total gallons of each cleaning solvent used.

(ii) The VOC content of each cleaning solvent.

(iii) The total gallons of each fountain solution used.

(iv) The VOC content of each fountain solution.

(v) The total pounds of each ink used.

(vi) The VOC content of each ink.

VOC calculations shall be based on the following formula using applicable retention factors identified in paragraph (I)(1) of this rule:

VOC emissions = amount of ink (pounds) x VOC content (weight fraction) x (1 - retention factor, as a fraction) + amount of fountain solution (gallons) x VOC content (pounds per gallon) + amount of cleaning solvent (gallons) x VOC content (pounds per gallon) x (1 - retention factor, as a fraction).

(2) When establishing that the heatset web offset lithographic or heatset web letterpress printing press potential VOC ink oil emissions, before control, from the press dryer of any heatset web offset lithographic printing press or heatset web letterpress printing press are less than twenty-five tons per year and, therefore, the facility is not subject to the add-on control requirements in paragraph (D)(1) of this rule, the owner or operator shall maintain the following records on a monthly basis for each such press:

(a) The total pounds of each ink used.

(b) The VOC content of each ink.

(c) The hours of operation of each press.

(3) If an owner or operator of an offset lithographic or letterpress printing facility determines they are subject to one or more of the control requirements in paragraph (D) of this rule based on the records required under paragraph (J) of this rule, the owner or operator shall comply with said requirements of this rule.

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