10 CSR 10-2.290 Control of Emissions From Rotogravure and Flexographic Printing Facilities

(1) Application.

(A) This rule shall apply throughout Clay, Jackson and Platte Counties.

(B) This rule applies to installations with emissions equal to or greater than two hundred fifty kilograms (250 kg) per day or one hundred (100) tons per year of volatile organic compounds (VOC) from the combination of rotogravure and flexographic printing presses. The uncontrolled potential emissions are the potential emissions (as defined) plus the amount by weight of VOCs whose emission into the atmosphere is prevented by the use of air pollution control devices.

(2) Definitions.

(A) Definitions of certain terms specified in this rule may be found in 10 CSR 10-6.020.

(B) The definition of a term specific to this rule is as follows: ink formulation, as applied, includes the base ink and any additives, such as thinning solvents, to make up the ink material that is applied to a substrate.

(3) Emission Limits.

(A) No owner or operator shall use or permit the use of any of the following printing presses unless they are equipped with a control device. The control device shall remove, destroy or prevent the emission of VOCs into the ambient air by at least the percentage indicated by weight of the uncontrolled VOC emissions on a daily basis.

Printing Press	Percentage
Flexographic	60
Publication Rotogravure	75
Other Rotogravure	65

(B) Low solvent technology may be used to achieve VOC emission reductions instead of the methods required in subsection (3)(A). If low solvent technology is used, the following limits must be met for each press:

1. For waterborne inks, the volatile portion of the ink as applied to the substrate must contain no more than twenty-five percent (25%) by volume of VOC; and

2. For water-based or high solids inks, the ink as applied to the substrate must be at least sixty percent (60%) by volume non-VOC material.

(C) No owner or operator shall use or permit the use of any flexographic or rotogravure printing press that uses cleanup solvents containing VOCs unless-

1. The cleanup solvents are kept in tightly covered tanks or containers during transport and storage;

2. The cleaning cloths used with the cleanup solvents are placed in tightly closed containers when not in use and while awaiting off-site transportation. The cleaning cloths should be properly cleaned and disposed of. The cloths, when properly cleaned or disposed of, are processed in a way that as much of the solvent as practicable is removed for some further use or destroyed. Cleaning and disposal methods shall be approved by the director; and

3. An owner or operator may use an alternate method for reducing cleanup solvent VOC emissions, including the use of low VOC cleanup solvents, if the owner or operator shows the emission reduction is equal to or greater than paragraphs (3)(C)1. and 2. This alternate method must be approved by the director.

(4) Recordkeeping.

(A) For owners or operators using an add-on control device(s) to meet the requirements of subsection (3)(A), the following parameters shall be monitored and recorded to determine compliance with subsection (3)(A):

1. Exhaust gas temperature of all incinerators or temperature rise across a catalytic incinerator bed on a continuous basis;

2. VOC breakthrough on a carbon adsorption unit on a continuous basis;

3. Results of emissions testing as required in section (5) of this regulation when performed;

4. Maintenance, repairs and malfunction of any air pollution control equipment when performed; and

5. Any other monitoring parameter required by the director to determine compliance with subsection (3)(A).

(B) For owners or operators meeting the requirements of subsection (3)(B) for each ink formulation used, the following shall be recorded for each press to determine continuous compliance with subsection (3)(D):

1. Volume-weighted ink VOC content in percent by volume for each ink formulation as applied on a monthly basis;

2. Results of ink testing as required in section (5) of this rule when performed; and

3. Any other information required by the director to determine compliance with subsection (3)(B).

(C) For owners and operators using low solvent technology without the use of control equipment to meet the requirements of subsection (3)(B), and for who subsection (4)(B) does not apply, the following shall be recorded to determine daily compliance with subsection (3)(B):

1. Volume-weighted ink VOC content in percent by volume for each ink formulation as applied on a monthly basis;

2. Ink usage in gallons for each ink formulation as applied on a daily basis for each press;

3. Volume-weighted density of VOCs in ink in pounds per gallon for each ink formulation as applied on a daily basis;

4. Volume-weighted average of the VOC content of each ink formulation as applied in percent by volume for each press on a daily basis;

5. Ink water content in percent by volume for each ink formulation as applied on a daily basis for each press;

6. Ink exempt solvent content in percent by volume for each ink formulation as applied on a daily basis for each press;

7. Results of ink testing as required in section (5) of this regulation when performed; and

8. Any other information required by the director to determine compliance with subsection (3)(B).

(D) Records of all information required in subsections (4)(A)-(C) shall be kept for at least two (2) years. These records shall be available immediately upon request for review by Department of Natural Resources personnel and other air pollution control agencies with proper authority.

(5) Determination of Compliance.

(A) Testing and compliance demonstrations for the emission limits of subsection (3)(A) shall follow the procedures contained in 10 CSR 10-6.030(14)(A) and 10 CSR 10-6.030(20). The averaging time for these tests shall be three (3) one (1)-hour tests. These procedures will determine control device capture efficiency and destruction efficiency. Control device testing will be required as the director determines necessary to verify the capture and destruction efficiencies. At a minimum, control device testing must be completed and submitted once to the appropriate air pollution control agency within one hundred eighty (180) days after this provision of the regulation is effective (August 4, 1992), unless the director determines that a valid test is already on file. Inlet and outlet gas temperature rise across a catalytic incinerator shall be used to determine daily compliance. These temperatures shall be monitored with an accuracy of the greater of plus or minus three-fourths percent ($\pm$ 0.75%) of the temperature being measured expressed in degrees Celsius or two and one-half degrees Celsius (2.5EC).

(B) Testing and compliance demonstrations for the emission limits of subsection (3)(B) shall follow the procedures contained in 10 CSR 10-6.030(14)(C). This procedure will determine the VOC content of inks. Ink testing will be required as the director determines necessary to verify the manufacturer's formula specifications. At a minimum, ink testing will be required once after this provision of the rule is effective. Ink manufacturer's formula specifications shall be used to determine daily compliance.

EPA Rulemakings

CFR: 40 C.F.R. 52.1320(c)(84)(i)(A)
FRM: 58 FR 45451 (8/30/93); Correction Notice 59 FR 43376 (9/6/94)
PRM: 58 FR 30730 (5/27/93)
State Submission: 9/23/92
State Proposal: 16 MR 1068 (8/1/91)
State Final: 10 C.S.R. 10-2 (3/30/92)
APDB File: MO-99
Description: The EPA approved revisions to the rule which: (1) improved changes to the language to aid in compliance and enforcement, (2) specified that exhaust temperature gas data and (VOC breakthrough data for carbon adsorption units be recorded daily, (3) required testing to determine compliance with the rules be conducted within 180 days of the effective date of the rules, and (4) contained new requirements for cleanup solvent usage and storage.

CFR: 40 C.F.R. 52.1320(c)(79)(i)(B)
FRM: 59 FR 43480 (8/24/94), Correction Notice 60 FR 16806 (4/3/95)
PRM: 57 FR 32191 (7/21/92)
State Submission: 11/20/91
State Proposal: 16 MR 989 (7/1/91)
State Final: 10 C.S.R. 10-2 (11/29/91)
APDB File: MO-100
Description: This revision updates rule to include the correct reference method specified in 10 C.S.R. 10-6.030.

CFR: 40 C.F.R. 52.1320(c)(65)(i)(G)
FRM: 54 FR 10322 (3/13/89) and 55 FR 7712 (3/5/90)
PRM: 53 FR 24735 (6/30/88)
State Submission: 12/18/87
State Proposal: 12 MR 993 (7/13/87)
State Final: 12 MR 1954 (12/14/87)
APDB File: MO-49
Description: The EPA approved revisions to the rule which: (1) improved clarity and enforceability, (2) made compliance test methods more specific, and (3) added provisions for plantwide compliance plans which utilize one-day weighted averages from a combination of source operations. The EPA approved this rule with the understanding that any alternative compliance plans would have to be submitted and approved by the EPA as SIP revisions [40 C.F.R. 52.1323(b)].

CFR: 40 C.F.R. 52.1320(c)(25)(v)
FRM: 46 FR 20172 (4/3/81)
PRM: 45 FR 84099 (12/22/80)
State Submission: 9/2/80
State Proposal: 5 MR 373 (4/1/80)
State Final: 5 MR 1131 (9/2/80) and 13 MR 200 (2/1/88) (correction)
APDB File: MO-12
Description: The EPA approved a new regulation as part of the Group II CTGs.

Difference Between the State and EPA-Approved Regulation

The state rule has Sections (6)(A) and (6)(B), which the EPA has not approved.