



**FG-MACT KK-PRINTING**  
**FLEXIBLE GROUP CONDITIONS**  
**40 CFR Part 63, Subpart KK covers major sources of HAPs.**

**Red text identifies options. Select the option that applies to the source and change the text to black. Delete red text that does not apply and renumber conditions if necessary.**

**Blue text is guidance or notes on the use of the template. Delete all blue text prior to issuing the final permit or submitting it with a permit application. Read through all conditions. If the permittee has control equipment, or wants the option to add control equipment in the future, use all the conditions in this template, selecting the appropriate control type for the tables. If there is currently no control or no plans to add control, eliminate the conditions that reference use of control (red conditions).**

**If this template is being used for an ROP Reopening or Renewal, and the MACT conditions were established in a PTI, the appropriate footnotes which reference enforceability must be added to each applicable condition in the template.**

### **DESCRIPTION**

Each new and existing facility that is a major source of hazardous air pollutants (HAPs) at which publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing presses are operated as defined in 40 CFR Part 63, Subpart KK, 63.820. Affected sources include equipment and processes described in 40 CFR 63.821.

**The following information may be incorporated into the staff report as it applies to the source:**

- New and existing facility is defined in 63.2. **(40 CFR 63.820(a)(1))**
- There are no future compliance dates.

There are no future compliance dates.

40 CFR Part 63, Subpart KK - Final rule issued and published in the Federal Register on May 30, 1996. Subsequent amendments to Subpart KK have been issued and published in the Federal Register on May 24, 2006.

**Emission Units: Identify Emission Units in this Flexible Group**

### **POLLUTION CONTROL EQUIPMENT**

**Identify specific control equipment used by the facility.**

**I. EMISSION LIMIT(S) Select all appropriate limits for the facility and number the conditions accordingly. If the source has BOTH Product and Packaging Rotogravure AND Wide-Web Flexographic, change the OR to AND in the Equipment box.**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Organic HAP	8% of the total volatile matter used	Calendar month	Publication Rotogravure	SC V.1, VI.1, VI.2, VI.3, VI.4, VI.5 & VI.6	<b>40 CFR 63.824(b)</b>

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
2. Organic HAP	5% of the organic HAP applied; OR  4% of the mass of all materials applied; OR  20% of the mass of solids applied; OR  A calculated equivalent allowable mass based on the organic HAP and solids contents of inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, and other materials applied.	Calendar month	Product and Packaging Rotogravure  OR  Wide-Web Flexographic	SC V.1, VI.1, VI.2, VI.3, VI.6, VI.7 & VI.8	<b>40 CFR 63.825(b)</b>

- The permittee shall demonstrate compliance with the emission limits of 40 CFR 63.824(b) for a publication rotogravure printing affected source, using one of the procedures specified in SC VI.4. **(40 CFR 63.824(b))**
- The permittee shall demonstrate compliance with the emission limits of 40 CFR 63.825(b) for product and packaging rotogravure and/or wide-web flexographic printing affected sources, using one of the procedures specified in SC VI.5. **(40 CFR 63.825(b))**

## **II. MATERIAL LIMIT(S)**

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

## **III. PROCESS/OPERATIONAL RESTRICTION(S)**

- The permittee shall not operate any publication rotogravure printing affected source unless a control device is used, which achieves overall control of at least 92 percent of organic HAP used; non-HAP materials are substituted for organic HAP; or a combination of capture and control technologies and substitution of material is applied. **(40 CFR 63.824(b))**
- The permittee shall not operate any product and packaging rotogravure and/or wide-web flexographic printing affected sources unless low HAP materials are used or a capture system and control device with an overall organic HAP control efficiency of at least 95 percent for each month is used. **(40 CFR 63.825(b))**

## **IV. DESIGN/EQUIPMENT PARAMETER(S)**

NA

## **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall perform the applicable performance tests to determine organic HAP content, VOC content, destruction efficiency of the control device, and capture efficiency of each capture system as specified in 40 CFR 63.827(b) through (e). **(40 CFR 63.827)**

See Appendix 5

## **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. To demonstrate continuing compliance, the permittee shall monitor and inspect each control device required to comply with 40 CFR 63.824 and 40 CFR 63.825 to ensure proper operation and maintenance by implementing the applicable requirements as follows:
  - a. For product and packaging rotogravure or wide-web flexographic presses with intermittently-controlled work stations, the permittee shall follow the procedures in 40 CFR 63.828 (a)(1)(i) through (iv) for each dryer associated with such work station. **(40 CFR 63.828(a)(1))**
  - b. Compliance monitoring shall be subject to the provisions of 40 CFR 63.828(a)(2)(i) and (ii), as applicable. **(40 CFR 63.828(a)(2))**
  - c. If complying through continuous emission monitoring of a control device, the permittee shall install, calibrate, operate and maintain a CEMS to measure the total organic volatile matter concentration at both the control device inlet and outlet. **(40 CFR 63.828(a)(3))**
  - d. If complying through the use of an oxidizer and demonstrating continuous compliance through monitoring of an oxidizer operation parameter, the permittee shall install, calibrate, operate and maintain a temperature monitoring device equipped with a continuous recorder as described in 40 CFR 63.824(a)(4)(i) or (ii). **(40 CFR 63.828(a)(4))**
  - e. If complying through the use of a control device and demonstrating continuous compliance by monitoring an operating parameter to ensure that the capture efficiency measured during the initial compliance test is maintained, the permittee shall submit and conduct a monitoring plan as described in 40 CFR 63.828(a)(5)(i) through (iii). **(40 CFR 63.828(a)(5))**
2. The permittee shall keep all records required by 40 CFR Part 63, Subpart A as identified in Table 1 to Subpart KK. **(40 CFR 63.829(a))**
3. The permittee shall maintain monthly records specified in 40 CFR 63.829(b) and (c) in accordance with 63.10(b), and all other applicable records specified in 40 CFR 63.829(d) through (f). These include but are not limited to: **(40 CFR 63.829)**
  - a. Records specified in 40 CFR 63.10(b)(2) of all measurements needed to demonstrate compliance. **(40 CFR 63.829(b)(1))**
  - b. Records specified in 40 CFR 63.10(b)(3) for each applicability determination performed by the permittee in accordance with the requirements of 40 CFR 63.820(a). **(40 CFR 63.829(b)(2))**
  - c. Records specified in 40 CFR 63.10(c) for each continuous monitoring system in accordance with the requirements of 40 CFR 63.828(a). **(40 CFR 63.829(b)(3))**
  - d. Records of all liquid-liquid material balances performed in accordance with the requirements of 40 CFR 63.824 and 40 CFR 63.825. **(40 CFR 63.829(c))**
4. For publication rotogravure presses, the permittee shall demonstrate compliance with the emission limits of 40 CFR 63.824(b) using one of the methods identified in the following table for the applicable compliance option. **(40 CFR 63.824(b))**

<b>Compliance Option</b>	<b>Compliance Demonstration Method</b>
Solvent Recovery System <b>(40 CFR 63.824(b)(1))</b>	Perform a liquid-liquid material balance on a monthly basis as specified in 40 CFR 63.824(b)(1)(A) through (G), OR  Use continuous emissions monitors, conduct initial performance test of capture efficiency, and continuously monitor a site specific operating parameter as specified in 40 CFR 63.824(b)(1)(ii)(A) through (b)(1)(ii)(E).

<b>Compliance Option</b>	<b>Compliance Demonstration Method</b>
Oxidizer (40 CFR 63.824(b)(2))	Conduct initial performance test and continuously monitor oxidizer operating parameters as specified in 40 CFR 63.824(b)(2)(i)(A) through (b)(2)(i)(E), OR  Use continuous emissions monitors, conduct an initial performance test of capture efficiency, and continuously monitor a site specific operating parameter in accordance with the requirements of 40 CFR 63.824(b)(1)(ii).
No Control Device (40 CFR 63.824(b)(3))	Compare the mass of organic HAP used to the mass of volatile matter used each month as specified in 40 CFR 63.824(b)(3)(i) through (b)(3)(iv).

5. For product and packaging rotogravure presses and/or wide-web flexographic presses, the permittee shall demonstrate compliance with the emission limits of 40 CFR 63.825(b) using one of the methods identified in the following table for the applicable compliance option. **(40 CFR 63.825(b))**

<b>Compliance Option</b>	<b>Compliance Determinations</b>
Use of low HAP materials (inks, thinners, adhesives etc.)	<ol style="list-style-type: none"> <li>1. Demonstrate that each material applied for the month, contains no more than 0.04 weight-fraction organic HAP, as purchased, in accordance with 40 CFR 63.827(b)(2). <b>(40 CFR 63.825(b)(1))</b></li> <li>2. Demonstrate that each material applied during the month contains no more than 0.04 weight-fraction organic HAP, on a monthly average as-applied basis, in accordance with 40 CFR 63.825(b)(2). <b>(40 CFR 63.825(b)(2))</b></li> <li>3. Demonstrate, in accordance with 40 CFR 63.825(b)(3)(ii), that each solids-containing material applied either: <ul style="list-style-type: none"> <li>• Contains no more than 0.04 weight-fraction organic HAP on a monthly average as-applied basis, OR</li> <li>• Contains no more than 0.20 kg of organic HAP per kg of solids applied on a monthly average as-applied basis using equations 4 and 5 of 40 CFR 63.825(b)(3). <b>(40 CFR 63.825(b)(3))</b></li> </ul> </li> <li>4. Demonstrate that the monthly average as-applied organic HAP content of all materials applied is less than 0.04 kg HAP per kg of material applied, as determined by Equation 6 of 40 CFR 63.825(b)(4). <b>(40 CFR 63.825(b)(4))</b></li> <li>5. Demonstrate that the monthly average as-applied organic HAP content on the basis of solids applied is less than 0.20 kg HAP per kg solids applied, as determined by Equation 7 of 40 CFR 63.825(b)(5). <b>(40 CFR 63.825(b)(5))</b></li> <li>6. Demonstrate that the total monthly organic HAP applied as determined by Equation 8 of 40 CFR 63.825(b)(6) is less than the calculated equivalent allowable organic HAP as determined by 40 CFR 63.825(e). <b>(40 CFR 63.825(b)(6))</b></li> </ol>
Operation of a capture system and control device	<ol style="list-style-type: none"> <li>1. Demonstrate that the capture system and control device have an overall control efficiency of at least 95 percent for each month in following the procedures in 40 CFR 63.825(c) or (d). <b>(40 CFR 63.825(b)(7))</b></li> <li>2. Demonstrate that the capture system and control device limit the organic HAP emission rate to no more than 0.20 kg organic HAP per kg solids applied on a monthly average as-applied basis. <b>(40 CFR 63.825(b)(8))</b></li> <li>3. Demonstrate that the capture system and control device limit the organic HAP emission rate to no more than 0.04 kg organic HAP per kg material applied as determined on a monthly as-applied basis. <b>(40 CFR 63.825(b)(9))</b></li> <li>4. Demonstrate that the capture system and control device limit the monthly organic HAP emissions to less than the allowable emissions as calculated in accordance with 40 CFR 63.825(e). <b>(40 CFR 63.825(b)(10))</b></li> </ol>

6. For any of the compliance demonstration options using control, if the facility operates more than one capture system or control device, one or more never-controlled work stations, or one or more intermittently controllable work stations, compliance shall be demonstrated according to the procedures in 40 CFR 63.825(f) and (g).

- For any of the compliance demonstration options using control, if the facility operates more than on capture system or control device, and has no never-controlled work stations and no intermittently-controlled work stations, compliance shall be demonstrated according to the procedures in 40 CFR 63.825(h).

See Appendices {Enter 3, 4, and/or 7}

**VII. REPORTING**

- Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
- The permittee shall submit all applicable reports specified in 40 CFR Part 63, Subpart A General Provisions as described in Table 1 to Subpart KK. **(40 CFR Part 63, Subpart A and Subpart KK)**
- The permittee shall submit the applicable reports specified in 40 CFR 63.830(b)(1) through (b)(6). These include an initial notification required in 40 CFR 63.9(b), a Notification of Performance Tests specified in 40 CFR 63.7, and 40 CFR 63.9(e), a site specific test plan required under 40 CFR 63.7(c)(2), and a Notification of Compliance Status specified in 40 CFR 63.9(h). **(40 CFR 63.830)**
- If a control device is used and a startup, shutdown, or malfunction occurs during the semiannual reporting period, the permittee shall submit a SSM report as specified in 40 CFR 63.830(b)(5). **(40 CFR 63.830(b), 40 CFR 63.10(d)(5))**

See Appendix 8

**VIII. STACK/VENT RESTRICTION(S)**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

**IX. OTHER REQUIREMENT(S)**

- The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Parts 9 and 63, Subpart A and Subpart KK for the Printing and Publishing Industry by the initial compliance date. **(40 CFR Part 63, Subparts A and KK)**

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).  
<sup>2</sup>This condition is federally enforceable and was established pursuant to Rule 201(1)(a).