

**Louisville Metro Air Pollution Control District**  
**850 Barret Ave., Louisville, Kentucky 40204**  
**31 July 2015**

**Federally Enforceable District Origin Operating Permit**  
**Statement of Basis**

**Company:** Louisville Facility Koroseal Interior Products

**Plant Location:** 4700 Shepherdsville Road, Louisville, Kentucky 40218

**Date Application Received:** 09/15/2006; 10/06/2006; 08/14/2013; 03/31/2014; 04/08/2014

**Date of Draft Permit:** 31 July 2015

**District Engineer:** Eva Addison

**Permit No:** O-1173-15-F

**Plant ID:** 1173

**SIC Code:** 2754

**NAICS:** 323111

**Introduction:**

This permit will be issued pursuant to District Regulation 2.17- *Federally Enforceable District Origin Operating Permits*. Its purpose is to limit the plant wide potential emission rates from this source to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), 1 hr and 8 hr ozone (O<sub>3</sub>), and particulate matter less than 10 microns (PM<sub>10</sub>); and is a non-attainment area for the 1997 standard for particulate matter less than 2.5 microns (PM<sub>2.5</sub>), unclassifiable for the 2012 standard for particulate matter less than 2.5 micron (PM<sub>2.5</sub>) and partial non-attainment area for sulfur dioxide (SO<sub>2</sub>).

**Application Type/Permit Activity:**

Initial Issuance

Permit Revision

Administrative

Minor

Significant

Permit Renewal

**Compliance Summary:**

Compliance certification signed

Compliance schedule included

Source is out of compliance

Source is operating in compliance

**I. Source Information**

1. **Product Description:** Louisville Facility Koroseal Interior Products is a commercial wallcovering production plant.
2. **Process Description:** Rotogravure printing.
3. **Site Determination:** There are no other facilities that are contiguous or adjacent to this facility.
4. **Emission Unit Summary:**

Emission Unit	Equipment Description
U1	Rotogravure printing presses and laminators
U2	Adhesive Mixing Operation

5. **Fugitive Sources:** There are no fugitive sources identified by the source.
6. **Permit Revisions:**

Revision No.	Permit No.	Issue Date	Public Notice Date	Change Type	Change Scope	Description
Initial	304-02-F.	03/13/2003	02/09/2003	Initial	Entire Permit	Initial Permit Issuance
N/A	O-1173-15-F	0X/xx/2015	07/31/2015	Renewal	Entire Permit	Permit renewal; incorporation of equipment from construction permits 337-06-C; 338-06-C and 349-06-C

**7. Construction Permit History:**

Permit No.	Issue Date	Description
337-06-C	10/30/2007	One (1) Littleford Daymax, Model 200, 200 gallon disperser (mixer)
338-06-C	10/30/2007	One (1) American Air Filter, Arrestall Model 1200 dust collector for the Littleford Daymax mixer and one (1) custom made vacuum dust collector for Laminator #1

Permit No.	Issue Date	Description
349-06-C	10/02/2007	One (1) Rotomec rotogravure printing press (Printer #5) for printing on vinyl substrate

**8. Emission Summary:**

Pollutant	District Calculated Actual Emissions (tn/yr) 2009 Data	Pollutant that triggered Major Source Status (based on PTE)
CO	0.356	No
NO <sub>x</sub>	0.424	No
SO <sub>2</sub>	0.003	No
PM <sub>10</sub>	0.140	No
VOC	10.519	Yes
Total HAPs	0.799	No
Single HAP	0.008	No

**9. Applicable Requirements:**

PSD       40 CFR 60       SIP       40 CFR 63  
 NSR       40 CFR 61       District-Origin       Other

**10. MACT Requirements:** The source has no future MACT requirements.

**11. Referenced Federal Regulations in Permit:** 40 CFR 60 Subpart FFF

**II. Regulatory Analysis**

**1. Acid Rain Requirements:** Louisville Facility Koroseal Interior Products is not subject to the Acid Rain Program.

**2. Stratospheric Ozone Protection Requirements:** Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. Louisville Facility Koroseal Interior Products does not manufacture, sell, or distribute any of the listed chemicals. The source’s use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.

**3. Prevention of Accidental Releases 112(r):** Louisville Facility Koroseal Interior

Products does not manufacture, process, use, store, or otherwise handle one or more of the regulated substances listed in 40 CFR Part 68, Subpart F, and District Regulation 5.15, *Chemical Accident Prevention Provisions*, in a quantity in excess of the corresponding specified threshold amount.

4. **40 CFR Part 64 Applicability Determination:** Louisville Facility Koroseal Interior Products is not subject to 40 CFR Part 64 - *Compliance Assurance Monitoring for Major Stationary Sources*.
5. **Basis of Regulation Applicability**

- a. **Plant-wide**

Louisville Facility Koroseal Interior Products is a potential major source for the pollutant VOC. Regulation 2.17 – *Federally Enforceable District Origin Operating Permits* establishes requirements to limit the plant wide potential emission rates to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements. The source requested limits of the criteria pollutant VOC < 25 tn/yr to be a FEDOOP STAR Exempt source as defined by Regulation 5.00, section 1.13.5. The source is not major for Greenhouse Gases.

Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establishes requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards. Louisville Facility Koroseal Interior Products requested total plant wide limits of 25 tpy for criteria pollutants to be a FEDOOP STAR Exempt source

Regulation 2.17, section 5.2, requires monitoring and record keeping to assure ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the district upon request.

Regulation 2.17, section 7.2, requires stationary sources for which a FEDOOP is issued shall submit an Annual Compliance Certification by April 15, of the following calendar year. In addition, as required by Regulation 2.17, section 5.2, the source shall submit an Annual Compliance Report to show compliance with the permit, by March 1 of the following calendar year. Compliance reports and compliance certifications shall be signed by a responsible official and shall include a certification statement per Regulation 2.17, section 3.5.

b. **Emission Unit U1 – Rotogravure printing presses and laminator**

i. **Equipment:**

<b>Emission Point</b>	<b>Capacity</b>	<b>Application Date</b>	<b>Applicable Regulation</b>	<b>Basis for Applicability</b>
E1: #1 Laminator, Liberty Machine	30 yds/min	12/09/1994	6.29; 7.08; 40 CFR 60 Subpart FFF	Regulation 6.29 establishes the requirements for VOC emission from Graphic Arts Facilities  Regulation 7.08 establishes the requirements for PM emissions from new processes that commence construction after September 1, 1976  Regulation 40 CFR 60 Subpart FFF establishes the requirements for VOC emissions from Flexible Vinyl and Urethane Coating and Printing for which construction or modification happened after January 18, 1983
E2: #4 Printer, W&H/624	40 yds/min	02/08/2001	6.29; 40 CFR 60 Subpart FFF	
E3: #5 Printer, Romotec/1625	50 yds/min	09/15/2006	6.29; 40 CFR 60 Subpart FFF	

ii. **Standards/Operating Limits**

1) **VOC**

- (a) Regulation 6.29 establishes VOC content limits for various inks and solvents (<35% by weight of the VOC net input).
- (b) Regulation 40 CFR 60 Subpart FFF establishes VOC content limits for various inks and solvents (1 kilogram by weighted average per kilogram ink solids).

2) **PM**

- (a) The emission standard for PM for laminator #1 is determined in accordance with Regulation 7.08, Table 1. Since the capacity of laminator #1 is less than 1,000 lb/hr, the PM emission standard is 2.34 lb/hr.
- (b) The District has performed a one-time PM compliance demonstration for laminator #1 and the lb/hr standard cannot be exceeded uncontrolled.

Therefore, there are no monitoring, record keeping, and reporting requirements with respect to PM lb/hr emission limits.

3) **Opacity**

- (a) For laminator #1: Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%, for processes that commenced construction after September 1, 1976.

iii. **Monitoring and Record keeping**

1) **VOC**

- (a) Regulation 6.29 establishes specific monitoring and record keeping for equipment subject to this regulation, including amount and type of each ink, coating, and solvent used at the point of application; VOC content as applied; date of each application of ink, etc.
- (b) Regulation 40 CFR 60 Subpart FFF establishes monitoring and record keeping requirement as follows:
- (i) The weighted average mass of VOC per mass of coating solids applied shall be calculated using the following methodology, unless the District approves in writing an alternative method: (40 CFR 60 Subpart FFF, section 60.583(b))

$$G = \frac{\sum W_{oi} M_{ci}}{\sum W_{ci} M_{si}}$$

Where:

G the calculated weighted average mass (lb) of VOC per mass (lb) of coating solids applied during a calendar month

M<sub>ci</sub> the total mass (lb) of each ink and coating (i) applied during a calendar month as determined from the coating manufacturer's formulation data

$W_{oi}$  the weight fraction of VOC of each ink and coating (i) applied during the calendar month as determined from the coating manufacturer’s formulation data

$W_{si}$  the weight fraction of solids of each ink and coating (i) applied during the calendar month as determined from the coating manufacturer’s formulation data

c. **Emission Unit U2 – Mixing of Adhesive**

i. **Equipment:**

Emission Point	Capacity	Application Date	Applicable Regulation	Basis for Applicability
E4: Mixer, Littleford Daymax	200 gallons	10/06/2006	7.08 and 7.25	Regulation 7.08 establishes the requirements for PM emissions from new processes that commence construction after September 1, 1976  Regulation 7.25 establishes VOC standards for affected facility constructed after June 13, 1979

ii. **Standards/Operating Limits**

1) **VOC**

- (a) Per Regulation 7.25, VOC emissions from the mixer and any new equipment shall be limited to less than 5.0 tons per 12 consecutive month period. (A BACT determination is required to be performed for any future construction/modification subject to Regulation 7.25 for any emissions outside of the 5 tpy limit.)
- (b) The potential to emit for the mixer is 1.36 tpy, therefore, there are no monitoring, record keeping, or reporting requirements to demonstrate compliance with the less than 5.0 tons per 12 consecutive month limit.

2) **PM**

- (a) The emission standard for PM for the mixer is determined in accordance with Regulation 7.08, Table 1. Since the capacity of the mixer is less than 1,000 lb/hr, the PM emission standard is 2.34 lb/hr.
- (b) The District has performed a one-time PM compliance demonstration for the mixer and the lb/hr standard can be exceeded uncontrolled. Therefore, the control device is required to be utilized.

3) **Opacity**

For the mixer: Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%, for processes that commenced construction after September 1, 1976.

**III. Other Requirements**

- 1. **Temporary Sources:** The source did not request to operate any temporary facilities.
- 2. **Short Term Activities:** The source did not report any short term activities.
- 3. **Emissions Trading:** N/A
- 4. **Operational Flexibility:** The source did not request any operation flexibility.
- 5. **Compliance History:**

Incid. #	Date	Regulation Violated	Settlement
01000	11/29/94	Reg. 2.03, section 1.2, operating without a permit	Agreement with fine

6. **Calculation Methodology or Other Approved Method:**

- a. Uncontrolled VOC emissions from the laminator and printing presses shall be calculated according to the following methodology unless another method is approved in writing by the District:

$$\text{VOC (lb)} = \text{Coating used (gal)} \times \text{Density (lb/gal)} \times \text{VOC content (\%)}$$

or

$$\text{VOC (lb)} = \text{Coating used (gal)} \times \text{VOC content (lb/gal)}$$

- b. Uncontrolled VOC emissions from the mixer shall be calculated according to the following methodology unless another method is approved in writing by the District:

$$\text{VOC (lb)} = \text{Raw material used (gal)} \times \text{Density (lb/gal)} \times \text{VOC content (\%)} \\ \text{or} \\ \text{VOC (lb)} = \text{Raw material used (gal)} \times \text{VOC content (lb/gal)}$$

- c. Uncontrolled PM emission from the mixer shall be calculated according to the following methodology unless another method is approved in writing by the District:

$$\text{PM (lb)} = \text{solids per batch (770 lb/batch)} \times \text{emission factor (20 lb PM/ton)} / \\ (2000 \text{ lb/ton}) \times \text{number of batches (\#batches)}$$

- d. Controlled PM emission from the mixer shall be calculated according to the following methodology unless another method is approved in writing by the District:

$$\text{PM (lb)} = \text{solids per batch (770 lb/batch)} \times \text{emission factor (20 lb PM/ton)} / \\ (2000 \text{ lb/ton}) \times \text{number of batches (\#batches)} \times \text{control efficiency (1 - 0.95)}$$

## 7. Insignificant Activities

There are no known insignificant activities located at this facility.