

Louisville Metro Air Pollution Control District
850 Barret Ave., Louisville, Kentucky 40204
04 March 2015

Construction Statement of Basis

Company: LLFLEX, LLC

Plant Location: 1225 West Burnett Ave, Louisville, Kentucky 40210

Date Application Received: 09 January 2015 **Application Number:** 68827

Date of Draft Permit: 04 March 2015

District Engineer: Emily Tyler **Permit No:** C-0015-1001-15-V

Plant ID: 0015 **SIC Code:** 3497 **NAICS:** 332999 **AFS:** 0015

Introduction:

This permit will be issued pursuant to District Regulation 2.03, Permit Requirements - Non-Title V Construction and Operating Permits and Demolition/Renovation Permits. Its purpose is to provide methods of determining continued compliance with all applicable requirements.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO₂), carbon monoxide (CO), 1 hr and 8 hr ozone (O₃), and particulate matter less than 10 microns (PM₁₀); and is a non-attainment area for particulate matter less than 2.5 microns (PM_{2.5}). A portion of the county is non-attainment for sulfur dioxide (SO₂).

Application Type/Permit Activity:

- Initial Issuance
- Permit Revision
 - Administrative
 - Minor
 - Significant
- Permit Renewal
- Construction

Compliance Summary:

- Compliance certification signed
- Source is out of compliance
- Compliance schedule included
- Source is operating in compliance

I. Source Information

1. **Product/Process Description:** Laminated and/or coated/printed aluminum foil.
2. **Project Description:** Modification of Laminator #14 to use solvent-based coatings and water-based coatings. A catalytic oxidizer will be installed on the exhaust from Laminator #14 system.
3. **Site Determination:** There are no other facilities that are contiguous or adjacent and under common control.
4. **Emission Unit Summary:**

Construction No.	Equipment Description
C-0015-1001-15	One (1) Inta-Roto Inc. GM-1000 Laminator controlled by a MEGTEC Systems Magnum 14,000 Catalytic Oxidizer.

5. Permit Revisions

Revision No.	Date of Issuance	Public Notice Date	Type	Emission Unit/Page No.	Description
Initial	X/X/2015	03/05/2015	Initial	Entire Permit	Initial Permit Issuance

6. **Fugitive Sources:** There are no fugitive emissions for this project.
7. **Plantwide Emission Summary:**

Pollutant	District Calculated Actual Emissions 2013 Data (tpy)	Major Source Status (based on PTE)
CO	3.93	No
NO _x	4.69	No
SO ₂	0.03	No
PM ₁₀	1.30	No
VOC	84.89	Yes
Single HAP > 1 tpy	N/A	Yes
Total HAPs	0.27	Yes

8. Applicable Requirements:

- | | | | |
|------------------------------|------------------------------------|---|---|
| <input type="checkbox"/> PSD | <input type="checkbox"/> 40 CFR 60 | <input checked="" type="checkbox"/> SIP | <input checked="" type="checkbox"/> 40 CFR 63 |
| <input type="checkbox"/> NSR | <input type="checkbox"/> 40 CFR 61 | <input checked="" type="checkbox"/> District-Origin | <input checked="" type="checkbox"/> 40 CFR 64 |

9. MACT Requirements:

40 CFR 63 Subpart KK National Emissions Standards for the Printing and Publishing Industry

10. Referenced Federal Regulations in Permit:

40 CFR 63 Subpart KK National Emissions Standards for the Printing and Publishing Industry

40 CFR 64 Compliance Assurance Monitoring

II. Regulatory Analysis

- 1. Acid Rain Requirements:** The source 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. This source 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, and commercial refrigerators. Additionally, in 1995, the source voluntarily substituted a high ozone depleting with a low ozone depleting compound in its refrigerator foaming operation under a "pollution control project" which received formal EPA approval on May 1, 1995.
- 3. Prevention of Accidental Releases 112(r):** The source 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. If the source becomes subject to 40 CFR 68 and Regulation 5.15, the source shall comply with the Risk Management Program and Regulation 5.15 and submit a Risk Management Plan to:

RMP Reporting Center
P.O. Box 3346
Merrifield, VA 22116-3346

4. Basis of Regulation Applicability

a. Applicable Regulations:

Regulation	Title	Type
1.05	Compliance with Emission Standards and Maintenance Requirements	SIP
2.03	Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements	SIP
2.05	Prevention of Significant Deterioration of Air Quality	PSD
2.16	Title V Operating Permits	SIP
5.00	Definitions	Local
5.01	General Provisions	Local
5.21	Environmental Acceptability for Toxic Air Contaminants	Local
6.29	Graphic Arts Facilities Using Rotogravure or Flexographic Printing	SIP
40 CFR 63 Subpart KK	National Emissions Standards for the Printing and Publishing Industry	Federal
40 CFR 64	Compliance Assurance Monitoring	Federal

b. Basis for Applicability

Regulation	Basis for Applicability
5.00, 5.01, 5.21	Establishes the requirements for Environmental Acceptability for TACs. The source is a Group I company with TAC emissions.
6.29	Each printing line for packaging rotogravure, publication rotogravure, specialty rotogravure, or flexographic printing.
40 CFR 63 Subpart KK	Establishes HAP emission limits or content limits for various inks and solvents for major sources of HAPs in the printing and publishing industry.
40 CFR 64	Enhanced monitoring requirements for major sources under Part 70 for VOC.

c. Permit C-0015-1001-15

i. Equipment:

Description Make/Model	Maximum Capacity	Control Device Description
Laminator #14 Inta-Roto Inc./GM-1000	N/A	Catalytic Oxidizer

ii. Standards/Operating Limits**a. VOC**

- i. Laminator #14 VOC emissions are limited to less than 45.01 tons per 12 consecutive month period in order to avoid PSD/Non-attainment NSR per Regulation 2.05.
- ii. Regulation 6.29 establishes VOC content limits for various inks and solvents (<35% by weight of the VOC net input). This laminator may use inks and solvents which exceed the VOC requirements. Therefore, a percent reduction limit is established.
- iii. The source is a CTG source and must show compliance on a daily basis per Regulation 1.05, section 4.1.

b. HAPs

40 CFR 63 Subpart KK establishes HAP emission limits or content limits for various ink and solvents. The source has opted to show compliance with the content limit standard (<4% HAP).

c. TACs

Regulations 5.01 and 5.21 require that TAC emissions do not exceed environmentally acceptable levels, whether specifically established by modeling or determined by the District to be de minimis.

iii. Monitoring and Record Keeping**a. VOC**

- i. Regulation 6.29 establishes monitoring and recordkeeping requires for rotogravure printing sources.
- ii. Regulation 40 CFR 64 requires the source to submit for approval sufficient monitoring and record keeping to demonstrate on going compliance.

b. HAP

40 CFR 63 Subpart KK establishes monitoring and record keeping requirements to demonstrate compliance with the MACT standards.

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 operational flexibility for this equipment.
5. **Compliance History:**

Incident Date(s)	Regulation Violated	Result
9/7/1999	2.03	Settled
6/20/2000	2.03	Settled
9/19/2000	7.18	Settled

6. Calculation Methodology:

- a. Uncontrolled VOC emissions from the laminators may be calculated according to the following methodology unless another method is approved by the District:

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

or

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

Controlled VOC emissions from Laminator #12 may be calculated according to the following methodology unless another method is approved by the District:

$$\text{VOC (lb)} = \text{Coating used (gal)} \times \text{Density (lb/gal)} \times \text{VOC content (\%)} \times [100 - \text{Capture Efficiency (\%)} \times \text{Destruction Efficiency (\%)}]$$

or

$$\text{VOC (lb)} = \text{Coating used (gal)} \times \text{VOC content (lb/gal)} \times [100 - \text{Capture Efficiency (\%)} \times \text{Destruction Efficiency (\%)}]$$

An example of a methodology to determine compliance is as follows unless another method is approved by the District:

$$\frac{\text{Total Solvent Based Controlled VOC Emissions}}{\text{Total Solvent Based Uncontrolled VOC Emissions}} \times 100\% < 35\%$$

- b. In a letter dated January 9, 2001, the source submitted their Notification of Compliance Status to the District and proposed to follow the compliance option §63.825(b)(4). To demonstrate compliance with §63.825(b)(4), the following equation is used:

$$H_L = \frac{\sum_{i=1}^p M_i C_{hi} + \sum_{j=1}^q M_j C_{hj}}{\sum_{i=1}^p M_i + \sum_{j=1}^q M_j}$$

C_{hi} = the organic HAP content of ink or other solids-containing material, i , expressed as a weight-fraction, kg/kg.

C_{hj} = the organic HAP content of solvent j , expressed as a weight-fraction, kg/kg.

H_L = the monthly average, as-applied, organic HAP content of all solids-containing materials applied at less than 0.04 kg organic HAP per kg of material applied, kg/kg.

M_i = the mass of ink or other material, i , applied in a month, kg.

M_j = the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j , applied in a month, kg.

p = the number of different inks, coatings, varnishes, adhesives, primers, and other materials applied in a month.

q = the number of different solvents, thinners, reducers, diluents, or other non-solids-containing materials applied in a month

7. **Permit Fee:** The construction permit fee of \$8,135.67 is based on the Schedule of Fees table in Regulation 2.08, section 12. The following table is a breakdown of the applicable fees.

Fee Type	Amount
Permit Actions: Significant Permit Revision New Construction	\$2,542.40
STAR Program De Minimis Determination Only (Per TAC up to 5 TACs)	\$508.48
PSD/NNSR (Per NSR Pollutant)	\$5,084.79

8. **Insignificant Activities:** There are no Insignificant Activities associated with this project.