



Louisville Metro Air Pollution Control District  
 701 West Ormsby Avenue, Suite 303  
 Louisville, Kentucky 40203-3137



**July 07, 2022**

**Title V  
 Statement of Basis**

**Source: LFFlex, LLC**  
**1225 W. Burnett Avenue**  
**Louisville, KY 40210**

**Owner: CLP LFFlex Holdings, LLC**  
**60 East 42<sup>nd</sup> Street, Suite 1400**  
**New York, NY 10165**

Application Documents:	See Table I-8	Administratively Complete:	December 2, 2021
Draft Permit:	05/21/2022	Proposed Permit:	05/21/2022
Permitting Engineer:	Aaron DeWitt	Permit Number:	O-0015-22-V
Plant ID: 0015	SIC: 2754	NAICS: 322220	

**Introduction:**

This permit will be issued pursuant to: (1) Regulation 2.16, (2) Title 40 of the Code of Federal Regulations Part 70, and (3) Title V of the Clean Air Act Amendments of 1990. Its purpose is to identify and consolidate existing District and Federal air requirements and to provide methods of determining continued compliance with these requirements.

This is a standard permit renewal. The company removed Boiler #1 (E-15) and replaced it with IA Boiler (E-24).

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), particulate matter less than 10 microns (PM<sub>10</sub>), particulate matter less than 2.5 microns (PM<sub>2.5</sub>), and sulfur dioxide (SO<sub>2</sub>). Jefferson County is classified as a nonattainment area for ozone (O<sub>3</sub>).

**Permit Application Type:**

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Initial issuance | Permit Revision                         | <input checked="" type="checkbox"/> Permit renewal |
|   | <input type="checkbox"/> Administrative |  |
|   | <input type="checkbox"/> Minor          |  |
|   | <input type="checkbox"/> Significant    |  |

**Compliance Summary:**

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Compliance certification signed | <input type="checkbox"/> Compliance schedule included                 |
| <input type="checkbox"/> Source is out of compliance                | <input checked="" type="checkbox"/> Source is operating in compliance |

**I Source Information**

**1. Product Description:**

Flexible packaging sheet materials made by coating or laminating purchased paper.

**2. Process Description:**

LLFlex, LLC laminates paper, board and other substrates to aluminum foil using adhesives or heat seal. Rotogravure printing stations are used to apply water-based and solvent-based coatings and inks to the aluminum foil, paper and board. The company has eight machines which do a combination of laminating and printing/coating. Each machine is equipped with a drying oven. The facility also operates a coater which heat seals materials together without the application of any VOC containing material.

**3. Site Determination:**

There are no other facilities that are contiguous or adjacent to this facility.

**4. Emission Unit Summary:**

<b>Emission Unit</b>	<b>Equipment Description</b>
Plantwide	Plantwide
U1/U2	Laminators and dry ovens
U3	Storage Vessels
UIA1	Particulate Emission Points
UIA2	Parts Washer
UIA3	Heating Boiler

**5. Fugitive Sources:**

The source identified no fugitive sources of emissions.

**6. Permit Revisions:**

<b>Permit No.</b>	<b>Public Notice Date</b>	<b>Issue Date</b>	<b>Change Type</b>	<b>Description/Scope</b>
148-97-TV	12/10/2000	09/28/2001	Initial	Initial Permit Issuance
148-97-TV (R1)	N/A	11/05/2002	Renewal	Administrative change to correct a typo

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
148-97-TV (R2)	10/29/2011	12/15/2011	Renewal	Significant Changes; Name and Responsible Official Change; Correct the applicable boiler regulation from 6.07 to 7.06; Incorporate CAM Plan
148-97-TV (R3)	02/17/2012	03/20/2012	Admin	Ownership/Name Change; see Administrative Change Document for list of corrections.
148-97-TV (R4)	N/A	09/21/2015	Admin	Incorporate Construction Permit C-0015-1001-15-V; add coating station to Laminator #10, add solvent coating to Laminator #14, and install new catalytic oxidizer for Laminator #14. Plantwide 250 tpy PSD avoidance limit added
O-0015-17-V	03/05/2017; 04/13/2017	05/30/2017	Renewal	Boiler #2 (E-14) permanently disabled and stack removed. Boiler E-14 was removed by 7/26/2016. Thermal Oxidizer (C-1) was disabled by 2/3/17. E-16 & E-16a added. 40.689 tpy limit removed from LAM #6.
O-0015-17-V (R1)	N/A	01/22/2018	Admin	Administrative change to include SIP Bubble limit and other changes from construction permit 103-74-C(R2)
O-0015-17-V (R2)	07/15/2021	09/20/2021	Sig.	Incorporation of ABO 11/18/2020. Designation as area source of HAP through incorporation of permittee requested source-wide HAP limits (Single HAP < 10 tpy, Total HAP < 25 tpy) to preclude applicability of 40 CFR 63 Subpart KK and 40 CFR 63 Subpart DDDDD.
O-0015-22-V	05/21/2022	07/07/2022	Renewal	Regularly scheduled renewal. Removed Boiler #1 (E-15), replaced with IA Boiler (E-24).

## 7. Construction Permit History:

Permit No.	Effective Date	Description
103-74-C (R2)	12/19/2017	Added VOC SIP bubble limits to laminators #6, #7, #8, #9, #10, #11 & #14, and Coater #15.

## 8. Application and Related Documents

Document Number	Date	Description
178517	12/01/2020	Reminder email that renewal application due 12/31/2021
287033	11/30/2021	TV Renewal Application
287230	11/30/2021	Email with TV Renewal Application
287788	12/02/2021	Application complete letter
328984	4/05/2022	Company copy of pre-draft permit for review
341281	5/11/2022	Company comments on pre-draft permit

## 9. Emission Summary

Pollutant	District Calculated Actual Emissions (tpy) 2020 Data	Pollutant that triggered Major Source Status (based on PTE)
CO	2.63	No
NO <sub>x</sub>	3.13	No
SO <sub>2</sub>	0.019	No
PM <sub>10</sub>	0.305	No
VOC	35.89	Yes
Total HAPs	1.063	Yes
Diethylene glycol monoethyl ether	0.39	Yes
Triethylamine	0.57	No

## 10. Applicable Requirements

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

**11. Referenced Federal Regulations:**

N/A

**12. Non-Applicable Regulations:**

Regulatory Citation	Emissions Unit	Regulatory Requirement	Basis for Non-Applicability
40 CFR 60 Subpart Kb	U3: Storage Vessels	Standards of Performance for Volatile Organic Liquid Storage Vessels: Subpart Kb applies to storage vessels with the capacity greater than or equal to 75 cubic meters (m <sup>3</sup> ) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification commenced after July 23, 1984.	The Site does not have storage vessels for VOL with a capacity of 75 m <sup>3</sup> or greater [40 CFR §60.110b(a)].
40 CFR 60 Subpart QQ	U1/U2: Laminators, Coater #15, and Dry Ovens	Standards of Performance for the Graphic Arts Industry – Publication Rotogravure Printing: Subpart QQ applies to publication rotogravure printing presses that were constructed, modified, or reconstructed after October 28, 1980.	The Site does not operate <i>Publication rotogravure printing presses</i> [as defined in 40 CFR 60.431(a)].
40 CFR 60 Subpart RR	U1/U2: Laminators, Coater #15, and Dry Ovens	Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations: Subpart RR applies to coating lines used in the manufacture pressure sensitive tape and label materials which was constructed, modified, or reconstructed after December 30, 1980.	The Site does not operate a coating line [as defined in 40 CFR §60.441(a)] to produce pressure sensitive tape and/or label materials. Aqueous and solvent based coating lines which apply a variety of adhesives and specialty coatings to paper and film substrates and do not have pressure sensitive properties are not subject to Subpart RR per U.S. EPA Applicability Determination Index Control Numbers NR38 and 9900023.
40 CFR 60 Subpart FFF	U1/U2: Laminators, Coater #15, and Dry Ovens	Standards of Performance for Flexible Vinyl and Urethane Coating and Printing: Subpart FFF applies to rotogravure printing lines used to print or coat flexible vinyl or urethane products which were constructed, modified, or reconstructed after January 18, 1983	The Site does not print or coat <i>Flexible vinyl or urethane products</i> [as defined in 40 CFR 60.581(a)].
40 CFR 60 Subpart SSS	U1/U2: Laminators, Coater #15, and Dry Ovens	Standards of Performance for Magnetic Tape Coating Facilities: Subpart SSS applies to coating operations in the manufacture of magnetic tape constructed, modified, or reconstructed after January 22, 1986.	This Site does not operate a <i>Coating operation</i> [as defined in 40 CFR §60.711(a)(5)] or manufacture <i>magnetic tape</i> [as defined in 40 CFR §60.711(a)(13)]

Regulatory Citation	Emissions Unit	Regulatory Requirement	Basis for Non-Applicability
40 CFR 60 Subpart VVV	U1/U2: Laminators, Coater #15, and Dry Ovens	Standards of Performance for Polymeric Coating of Supporting Substrates Facilities: Subpart VVV applies to each coating operation and coating mix preparation equipment used to prepare coatings for the polymeric coating of supporting substrates constructed, modified, or reconstructed after April 30, 1987	The Site does not perform <i>Polymeric coating of supporting substrates</i> [as defined in 40 CFR 60.741(a)]. The Site only performs coating of supporting webs made of paper, plastic film, metallic foil, or metal coil.
40 CFR 63 Subpart KK	U1/U2: Laminators, Coater #15, and Dry Ovens	National Emissions Standards for the Printing and Publishing Industry: Subpart KK applies to major sources of HAP at which publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing presses are operated	The Site is not a major source of HAP (as defined in 40 CFR §63.2) because it established area source status through an appropriate mechanism available by the permitting authority (LMAPCD). Therefore, Subpart KK is not applicable per 40 CFR §63.820(a)(7) and 40 CFR §63.820(a)(2).
40 CFR 63 Subpart JJJJ	U1/U2: Laminators, Coater #15, and Dry Ovens	National Emissions Standards for Hazardous Air Pollutants - Paper and Other Web Coating: Subpart JJJJ applies to major sources of HAP at which web coating lines are operated.	The Site is not a major source of HAP (as defined in 40 CFR 63.2). Therefore, in accordance with 40 CFR §63.1(c)(2) and Table 2 to Subpart JJJJ, Site coating lines metal webs used in flexible packaging (as described in 40 CFR §63.3300) are not subject to Subpart JJJJ.
40 CFR 63 Subpart OOOO	U1/U2: Laminators, Coater #15, and Dry Ovens	National Emissions Standards for Hazardous Air Pollutants - Printing, Coating, and Dyeing of Fabrics and Other Textiles: Subpart OOOO applies to major sources of HAP that print, coat, slash, dye, or finish fabric and other textiles.	<i>No Fabric or Textile</i> (as defined in 40 CFR §63.4371) is printed, coated, dyed, or finished at the Site.
40 CFR 63 Subpart DDDDD	Heating Boiler (IA3)	National Emissions Standards for Major Sources - Industrial, Commercial, and Institutional Boilers: Subpart DDDDD applies to major sources of HAP that owns and operates an industrial, commercial, or institutional boiler or process heater.	The Site does not operate a <i>process heater</i> (as defined at 40 CFR 3.7C5F75R). The Site is not a major source of HAP (as defined in 40 CFR §63.2).
40 CFR 63 Subpart JJJJJ	Heating Boiler (IA3)	National Emissions Standards for Area Sources - Industrial, Commercial, and Institutional Boilers: Subpart JJJJJ applies to area sources of HAP that owns and operated an industrial, commercial, or institutional boiler or process heater.	The Site is an area source of HAP (as defined in 40 CFR §63.2) and a <i>Boiler</i> (as defined at 40 CFR §63.11237); however, the Site operates a <i>gas-fired boiler</i> (as defined in 40 CFR §63.11237) which is not subject to the provisions of Subpart JJJJJ per 40 CFR §63.11195(e).

Regulatory Citation	Emissions Unit	Regulatory Requirement	Basis for Non-Applicability
40 CFR 63 Subpart HHHHH	U1/U2: Lacquer Mixing Room (Emissions Point E-22)	National Emissions Standards for Hazardous Air Pollutants - Miscellaneous Coating Manufacturing: Subpart HHHHH applies to major sources of HAP that manufacture coatings and process, use or produce HAP.	The Site does not meet all applicability requirements in 40 CFR 63.7985(a)(1) – (4) [i.e., Site is not a major source of HAP as in 40 CFR 63.7985(a)(1)]. Modifying a purchased coating in preparation for application at the purchasing facility is not subject to the requirements of miscellaneous coating manufacturing sources in 40 CFR §63.7985(d)(5).

**II Regulatory Analysis**

**1. Acid Rain Requirements:**

LLFlex, LLC 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. LLFlex, LLC 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):**

LLFlex, LLC 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:**

LLFlex, LLC is not subject to 40 CFR Part 64 - *Compliance Assurance Monitoring* because solvent based inks are no longer run on Laminator #14 (E-8) and operates under the site-specific VOC “bubble” limit.

**5. Basis of Regulation Applicability**

**a. Applicable Regulations**

Regulation	Title	Basis
1.05	Compliance with Emission Standards and Maintenance Requirements	Establishes daily record keeping requirements for sources emitting 100 tons per year or more of VOC and all Control Technique Guidance (CTG) sources to demonstrate compliance with applicable portions of Regulation 6 and 7
5.00	Standards for Toxic Air Contaminants and Hazardous Air Pollutants	Establishes limits to emit toxic air contaminants in a quantity or duration as to be harmful to the health and welfare of humans, animals, and plants.
5.01	General Provisions	
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	
5.21	Environmental Acceptability for Toxic Air Contaminants	
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	
5.23	Categories of Toxic Air Contaminants	
6.29	Standard of Performance for Existing Graphic Arts Facilities Using Rotogravure and Flexography	Applies to each printing line for packaging rotogravure, publication rotogravure, specialty rotogravure, or flexographic printing
40 CFR 52.920	Approval and Promulgation of Implementation Plans – Kentucky	Sets forth the applicable State Implementation Plan for Kentucky under section 110 of the CAA to meet NAAQS
7.12	Standard of Performance for New Storage Vessels for Volatile Organic Compounds	Applies to each storage vessel for VOC that commenced construction after April 19, 1972, and has a storage capacity greater than 250 gallons and true vapor pressure $\geq 10.4$ kPa (1.5 psia)



Regulation	Title	Basis
7.06	Standards of Performance for New Indirect Heat Exchangers	This regulation establishes the requirements for new indirect heat exchangers having a capacity less than 250 MMBtu/hr and commenced after the applicable classification date.
7.08	Standards of Performance for New Process Operations	This regulation establishes the requirements for PM emission from new processes that commences construction after September 1, 1976.
6.18	Standards of Performance for Solvent Metal Cleaning Equipment	This regulation applies to each cold cleaner that use VOCs to remove soluble impurities from metal surfaces.

**b. Plantwide**

- i. LIFlex, LLC is a major source for VOC. Regulation 2.16 - *Title V Operating Permits* establishes requirements for major sources. Based on the plantwide PTE evaluation, LIFlex, LLC has accepted limits to not be a PSD major source for VOC, as permitted in Permit O-0015-17-V, effective 5/30/2017.
- ii. LIFlex, LLC was a major source of HAP. The source requested source-wide limits of less than 25 tons per year total HAP and less than 10 tons per year of single HAP to preclude applicability of major source MACT standards.
- iii. Regulations 5.00 5.01, 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards.
- iv. LIFlex, LLC submitted a TAC Environmental Acceptability Demonstration to the District on March 2006, March 2008 & March 2012. Compliance with the STAR EA Goals was demonstrated in the source’s EA Demonstrations. The District reviewed the EA Demonstrations submitted by the source. All TAC emissions were demonstrated to be de minimis, therefore Tier 3 or Tier 4 modeling was not required to demonstrate environmental acceptability.
- v. Regulation 2.16, section 4.1.9.1 and 4.1.9.2 require 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.

- vi. Regulation 2.16, section 4.3.5, requires stationary sources for which a Title V is issued shall submit an annual compliance certification by April 15 of the following calendar year. In addition, as required by Regulation 2.16, section 4.1.9.3, the source shall submit compliance reports at least every six months to show compliance with the permit. Compliance reports and compliance certifications shall be signed by a responsible official and shall include a certification statement per Regulation 2.16, section 3.5.11.

**c. Emission Unit U1/U2 – Laminators and Dry Ovens**

EP	Description	Applicable Regulations	Control ID
E-22	One (1) Lacquer mixing room containing three (3) submerged-fill arms for filling drums with solvent, one (1) mixer and one (1) soak tank to support <i>Printing Line</i> operations in Emission Unit U2.	6.29	N/A
E-23	One (1) Gravure Impression Cylinder Washer to support <i>Printing Line</i> operations in Emission Unit U2.	6.29	N/A
E-13B	Storage of coatings in portable tote tanks, (~350 gallons each, ~50 on site)	6.29	N/A
E-1	Laminator #12 [Inta-Roto Inc., Model # GM-2000-M-201]	STAR <sup>1</sup> : 6.29	N/A
E-1a	Oven #12 [7.50 MMBtu/hr]		N/A
E-2	Laminator #6 [Inta-Roto Inc., Model # GM-1000]	STAR; 40 CFR 52.920	N/A
E-3	Laminator #7 [Schmutz Mfg, Model # 2768]		
E-4	Laminator #8 [Miesel Press Co]		
E-5	Laminator #9 Coating Station #1 [Miesel Press Co]		
E-16	Laminator #9 Coating Station #2 [Miesel Press Co.]		
E-6	Laminator #10 Coating Station #1 [Schmutz Mfg, Model # 2769]		
E-10	Laminator #10 Coating Station #2 [Cerutti, Model # 28R-38R]		
E-7	Laminator #11 [Anaconda & Fisher Klosterman, Model # MUCT-609-48-(60)]		
E-2a	Oven #6 [4.00 MMBtu/hr] <b>Error! Bookmark not defined.</b>	STAR; 6.29	N/A
E-3a	Oven #7 [3.60 MMBtu/hr] <b>Error! Bookmark not defined.</b>		

<sup>1</sup> STAR denotes District Regulations 5.00, 5.01, 5.20, 5.21, 5.22. and 5.23

EP	Description	Applicable Regulations	Control ID
E-4a	Oven #8 [5.40 MMBtu/hr] <b>Error! Bookmark not defined.</b>		
E-5a	#9 Oven #1 [3.60 MMBtu/hr] <b>Error! Bookmark not defined.</b>		
E-16a	#9 Oven #2 [1.8 MMBtu/hr] <b>Error! Bookmark not defined.</b>		
E-6a	#10 Oven #1 [3.60 MMBtu/hr] <b>Error! Bookmark not defined.</b>		
E-10a	#10 Oven #2 [0.8 MMBtu/hr] <b>Error! Bookmark not defined.</b>		
E-7a	Oven #11 [3.60 MMBtu/hr] <b>Error! Bookmark not defined.</b>		
E-8	Laminator #14 [Inta-Roto Inc., Model # GM-1000]	STAR; 40 CFR 52.920	C-2
E-8a	Oven #14 [3.60 MMBtu/hr] <b>Error! Bookmark not defined.</b>	STAR; 6.29	
E-9	Coater #15 [Waldron, Model # K4479]	40 CFR 52.920	N/A
E-9a	Oven #15 [8.00 MMBtu/hr] <b>Error! Bookmark not defined.</b>	N/A	

Control ID	Description	Control Efficiency
C-2	Catalytic Oxidizer [TEC Systems, Model Magnum 14000] Installed April 2016, 550°F operating temperature	>65%

**i. Standards**

**(1) HAP**

- (a) See the Plantwide section above.

**(2) VOC**

- (a) For Laminators #6, #7, #8, #9, #10, #11, #14, and Coater #15 combined:
  - (i) These emission points are covered by a source-specific State Implementation Plan Revision. The printing/coating machines were treated as one affected facility with a pound per day and ton per year VOC emission limit.
  - (ii) The APCB Board Order 11/18/2020 establishes requirements and/or limitations

for VOC emissions from Laminators #6, #7, #8, #9, #10, #11, #14, and Coater #15.

- (b) For emission point E-1 (Laminator 12): Regulation 6.29 establishes requirements and/or limitations for VOC emissions from subject affected facilities.
- (c) LLFlex is a CTG source and must show compliance on a daily basis per Regulation 1.05, section 4.1.
- (d) See the Plantwide section above.

**ii. Monitoring and Recordkeeping**

**(1) HAP**

- (a) See Plantwide Section.

**(2) VOC**

- (a) For Laminators #6, #7, #8, #9, #10, #11, #14, and Coater #15 combined: APCB Board Order 11/18/2020 has specific monitoring and record keeping requirements.
- (b) For emission point E-1 (Laminator 12): Regulation 6.29, has specific monitoring and record keeping requirements.
- (c) LLFlex is a CTG source and must maintain daily records and calculations that demonstrate daily compliance with the VOC emission standards per Regulation 1.05, section 4.1. Sources subject to the Control Technique Guidance Documents issued by EPA and embodied in Regulations (i.e., Regulation 6.29) where the calculations and recordkeeping requirements are specifically defined in the applicable portions of Regulation 6 or 7, those requirements shall be met as required in those regulations.

**iii. Reporting**

**(1) HAP**

- (a) See Plantwide Section.

**(2) VOC**

- (a) For Laminators #6, #7, #8, #9, #10, #11, #14, and Coater #15 combined: APCB Board Order 11/18/2020 has specific reporting requirements.

**d. Emission Unit U3 – Storage Vessels**

EP	Description	Applicable Regulations	Control ID
E-11	Tank #3, One (1) 1,000-gallon VOC storage vessel [Printing solvents tank]	STAR & 7.12	N/A
E-12	Tank #2, One (1) 2,000-gallon VOC storage vessel [Printing solvents tank]		
E-13	Tank #1, One (1) 1,000-gallon VOC storage vessel [Printing solvents tank]		
E-13A	Tank #4, One (1) 10,000-gallon VOC storage vessel [Water-based coatings tank]		

**i. Standards**

**(1) VOC**

- (a) Tanks #1, #2 & #3 have a storage capacity greater than 250 gallons, but less than 40,000 gallons and have contents with a true vapor pressure greater than 1.5 psia. They are required to be equipped with a permanent submerged fill pipe per Regulation 7.12.
- (b) Tank #4 has a storage capacity greater than 250 gallons, but less than 40,000 gallons. It is not equipped with a permanent submerged pipe; therefore, the vapor pressure of the contents must be less than 1.5 psia per Regulation 7.12.
- (c) See the Plantwide section above.

**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:**

The source is not subject to emission trading.

**4. Alternative Operating Scenarios:**

The source did not request any alternative operating scenarios.

**5. Compliance History:**

There have been no compliance actions since the last Title V was issued.

## 6. Calculation Methodology or Other Approved Method:

Generally, emissions are calculated by multiplying the throughput (ton, MMCF, gallons, etc) or hours of operation of the equipment by the appropriate emission factor and accounting for any control devices unless otherwise approved in writing by the District.

Equipment	Emission Point	Pollutant	Emission Factor	Determination Method
Laminator #12 Laminator #6 Laminator #7 Laminator #8 Laminator #9- Coating Station #1 Laminator #9- Coating Station#2 Laminator #10- Coating Station #1 Laminator #10- Coating Station #2 Laminator #11 Laminator #14 Portable Totes	E-1 E-2 E-3 E-4 E-5 E-16 E-6 E-10 E-7 E-8 E-13B	VOC	MSDS/SDS content	Mass balance calculation; see note 4
		HAPs	MSDS/SDS content	Mass balance calculation; see note 4
IA Boiler Oven #12 Oven #6 Oven #7 Oven #8 #9 Oven #1 #9 Oven #2 #10 Oven #1 #10 Oven #2 Oven #11 Oven #14 Oven #15	E-24 E-1a E-2a E-3a E-4a E-5a E-16a E-6a E-10a E-7a E-8a E-9a	NOx	100 lb/MMcf	AP-42 section 1.4, Table 1.4-1 through 1.4-4
		SO <sub>2</sub>	0.6 lb/MMcf	
		PM	7.6 lb/MMcf	
		VOC	5.5 lb/MMcf	
		CO	84 lb/MMcf	
Tank #3 Tank #2 Tank #1 Tank #4	E-11 E-12 E-13 E-13A	VOC	AP-42, Section 7.1	
Woodshop	E-17	PM	1.89% of material removed PM <sub>10</sub>	Estimating Emissions from Generation and Combustion of 'Waste Wood', July 15, 1998
Various dust collectors	E-18	PM		
Process scrap conveying systems	E-19	PM	0.25% of PM of total tonnage processed	Source estimate
Shot blast cabinet	E-20	PM	See note 3	See note 3
Parts washer	E-21	VOC	MSDS/SDS content	Mass balance calculation

Control Devices			
ID	Description	Efficiency	Basis
C-2	Catalytic Oxidizer, with 600°F minimum catalyst bed inlet temperature	98.1%	Capture and control performance test was conducted on July 25, 2017
IAC-20	Shot blast filters	90%	APCD default control efficiency

Note:

- Options for control efficiency determination:
  - Option 1: Use District pre-approved control efficiency
  - Option 2: Submit a signature guarantee from the control device manufacture stating the control device efficiency
  - Option 3: Perform stack test.
- Until the District receives a signature guarantee from the control device manufacturer stating the control device efficiency is higher (Option 2), or an approved stack test (Option 3), the pre-approved efficiency (Option 1) will be used in all calculations to demonstrate compliance with applicable standards and calculations for emission inventory.
- PM/PM<sub>10</sub> actual emissions from the Shot blast cabinet equipment shall be calculated according to the following methodology unless another method is approved in writing by the District:

Uncontrolled

PM(ton) = (operating time, hr) (capacity, 165 lb abrasive/hr) (emission factor, 27 lb/ 1000 lb abrasive)/ (2000, lb/ton)

PM<sub>10</sub>(ton) = (operating time, hr) (capacity, 165 lb abrasive/hr) (emission factor, 13 lb/ 1000 lb abrasive)/ (2000, lb/ton)

Controlled

PM(ton) = (operating time, hr) (capacity, 165 lb abrasive/hr) (emission factor, 27 lb/ 1000 lb abrasive) (1 – control efficiency, 90% for a filter)/ (2000, lb/ton)

PM<sub>10</sub>(ton) = (operating time, hr) (capacity, 165 lb abrasive/hr) (emission factor, 13 lb/ 1000 lb abrasive) (1 – control efficiency, 90% for a filter)/ (2000, lb/ton)

“XX” is the maximum capacity of the blast equipment.

- Uncontrolled VOC emissions 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

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

Controlled VOC emissions shall be calculated according to the following methodology unless another method is approved in writing by the District:

$$\text{VOC (lb)} = \text{Coating used (gal)} \times \text{Density (lb/gal)} \times \text{VOC content (\%)} \times [1 - (\text{Capture Efficiency (\%)/100} \times \text{Destruction Efficiency (\%)/100})]$$

or

$$\text{VOC (lb)} = \text{Coating used (gal)} \times \text{VOC content (lb/gal)} \times [1 - (\text{Capture Efficiency (\%)/100} \times \text{Destruction Efficiency (\%)/100})]$$

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

$$\frac{\text{Total Solvent Based Controlled VOC Emissions (lbs)}}{\text{VOC Net Input into the affected facility (lbs)}} \times 100\% < 35\%$$

**7. Insignificant Activities**

Equipment	Qty	PTE (ton/yr)	Regulation Basis
Internal combustion engines (forklifts)	4	0.14 NO <sub>x</sub>	Regulation 1.02, Appendix A
Maintenance shop brazing, soldering or welding equipment	2	0.02 PM	Regulation 1.02, Appendix A
Woodworking, not including conveying, hogging or burning of sawdust (see IA1)	1	0.03 PM	Regulation 1.02, Appendix A; See Note 7
Emergency relief vents and ventilating systems (not otherwise regulated)	3	N/A	Regulation 1.02, Appendix A
Laboratory ventilating	1	0.03 VOC	Regulation 1.02, Appendix A
Dust or particulate collectors that vent directly indoors in workspace (See IA1)	3	0.03 PM	Regulation 1.02, Appendix A; See Note 7
Cold solvent parts cleaners equipped with a functional secondary reservoir (See IA2)	1	0.01 VOC	Regulation 1.02, Appendix A; See Note 7
Process scrap conveying systems (See IA1)	2	4.15 PM	Regulation 2.16, section 1.23.1.2; See Note 7
Shot blast cabinet (See IA1)	1	4.68 PM	Regulation 2.16, section 1.23.1.2; See Note 7
Heating boiler (See IA3)	1	2.70 NO <sub>x</sub>	Regulation 1.02, Appendix A; See Note 7



1. Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements pursuant to Regulation 2.16, section 3.5.4.1.4.
2. Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements as required by Regulation 2.16, section 4.1.9.4.
3. The Insignificant Activities Table is correct as of the date the permit was proposed for review by U.S. EPA, Region 4.
4. Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.
5. The owner or operator shall submit an updated list of insignificant activities that occurred during the preceding year pursuant to Regulation 2.16, section 4.3.5.3.6.
6. The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions or use Potential to Emit (PTE) to be reported on the annual emission inventory.
7. The District has determined pursuant to Regulation 2.16, section 4.1.9.4 that no monitoring, record keeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) Basis of Regulation Applicability for IA units.

Equipment Not Regulated

Emission Point	Description
Glue tanks	One (1) glue storage tank (8,000 gallon) and three (3) mixing day tanks (500 gallons)

**a. Emission Unit IA1 – Particulate Emission Points**

EP	Description	Applicable Regulations	Control ID
E-17	One (1) woodshop	7.08	N/A
E-18	Three (3) dust collectors	7.08	N/A
E-19	Two (2) process scrap conveying systems	7.08	N/A
E-20	One (1) shot blast cabinet	7.08	IAC-20

Control ID	Description	Control Efficiency
IAC-20	Shot blast cabinet filters	90%

**i. Standards**

**(1) Opacity**

- (a) Regulation 7.08, section 3 establishes standards for opacity.

**(2) PM**

- (a) Regulation 7.08, section 3 establishes the method for determining the standard for PM for E-17 through E-20.
- (b) Regulation 7.08, Table 1 establishes standards for PM for E-17 through E-20.

**b. Emission Unit IA2 – Parts Washer**

EP	Description	Applicable Regulations	Control ID
E-21	One (1) Parts washer with secondary reservoir (35 gallons) and a surface opening two inches in diameter that contains non-HAP/non-TAC solvent cleaner.	6.18	N/A

**i. Standards**

**(1) VOC**

- (a) Regulation 6.18, section 4 establishes the requirements to install, maintain, and operate the parts washers.

**ii. Monitoring and Recordkeeping**

**(1) VOC**

- (a) The source is required to maintain records in accordance with Regulation 6.18, section 4.4.

**c. Emission Unit IA3 – Heating Boiler**

EP	Description	Applicable Regulations	Control ID
E-24	One (1) natural gas-fired boiler Make Sellers, model #15SR. Heat input 6.277 MMBtu/hr	STAR & 7.06	N/A

**i. Standards**

**(1) HAP**

(a) See Plantwide section above.

**(2) Opacity**

(a) The boiler is subject to the opacity standards in accordance with Regulation 7.06, section 4.2.

**(3) PM**

(a) The emission standard for PM is determined in accordance with Regulation 7.06, section 4.1.1. For sources with total heat input less than 10 MMBtu/hr, the standard is 0.56 lb/MMBtu.

**(4) SO<sub>2</sub>**

(a) The emission standard for SO<sub>2</sub> is determined in accordance with Regulation 7.06, section 5.1.1. For natural gas combustion and a heat input capacity less than 145 MMBtu/hr, the standard is 1 lb/MMBtu.

**(5) TAC**

(a) TAC emissions from the combustion of natural gas are considered “*de minimis*” based on Regulation 5.21, section 2.7.