

Louisville Metro Air Pollution Control District
701 West Ormsby Ave., Louisville, Kentucky 40203
08 June 2016

FEDOOP Statement of Basis

Owner/Source: Mondi Bags USA, LLC

Plant Location: 6820 Enterprise Drive, Louisville, Kentucky 40214

Date Application Received: 04/28/2006, 05/08/2007, 05/21/2008, 03/16/2012, 10/31/2014,
01/16/2015, 02/13/2015, and 03/02/2015

Date of Draft Permit: 08 June 2016

District Engineer: Shannon Hosey

Permit No: O-0193-16-F

Plant ID: 0193

SIC Code: 2759

NAICS: 323112

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 (NO₂), carbon monoxide (CO), 1 hr and 8 hr ozone (O₃), and particulate matter less than 10 microns (PM₁₀); is a non-attainment area for the 1997 standard for particulate matter less than 2.5 microns (PM_{2.5}) and is a unclassifiable area for the 2012 standard for particulate matter less than 2.5 microns (PM_{2.5}); and partial non-attainment area for sulfur dioxide (SO₂).

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:** Mondi Bags USA, LLC manufactures various consumer style bags using flexographic printing.
2. **Process Description:** The plant mainly serves the food, pet food, animal feed industries and specializes in the production of SOS bags, laminations and several specialized features.
3. **Site Determination:** There are no other facilities that are contiguous or adjacent and under common control.
4. **Emission Unit Summary:**

Emission Unit	Equipment Description
U1	Storage Tanks
U2	W&H Press, Solvent Wash Station and PEAD Bag Machine
U3	Extrusion Laminator, Lithographic VSOP Printing Press, Platemaker and Extrusion Laminator No. 2

5. **Fugitive Sources:** There were 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	0056-97-F	4/22/1997	03/16/1997	Initial	Entire Permit	Initial Permit Issuance
R1	0056-97-F (R1)	04/04/2000	03/05/2000	Minor	General Conditions [pages 2-4]	General Conditions Nos. 4, 11, 12 and 13 revised; new conditions added (Nos. 13 and 14)
R2	0056-97-F (R2)	07/02/2001	05/27/2001	Renewal	Entire Permit	Add attachment 39-00 and reissuance of entire permit.
R3	0056-97-F (R3)	10/30/2002	09/22/2002	Minor	117-97	Adding bag machines #24 and #25. Removing bag machine #8. Addition of the additional bag machines did not increase emission limits.

Revision No.	Permit No.	Issue Date	Public Notice Date	Change Type	Change Scope	Description
R4	0056-97-F (R4)	10/30/2002	NA	Admin	117-97	Administrative change to correct the identification of two bag machines.
NA	O-0193-16-F	xx/xx/2016	06/08/2016	Renewal	Entire Permit	Permit Renewal; Delete two (2) Gravure Presses, Coater (and Associated Equipment), Clay Slurry Tank, Bag Machines, and three (3) Slide Angle Tanks – All Physically Removed from Plant Site Since Original FEDOOP Issuance and Not to Return; Incorporate Construction Permits 370-05-C, 95-06-C, 272-06-C, C-0193-1004-14 and 34754-12-C(R3); and Reflect 01/15/16 Application for Re-Classification to STAR-Exempt FEDOOP Status.

7. Construction Permit History:

Permit No.	Issue Date	Description
370-05-C	10/31/2006	One (1) Extrusion laminator (E-WTR-EXT/LAM), design capacity 1100 pounds per hour.
95-06-C	06/30/2006	One (1) offset lithography printing press, Drent Goebel Model VSOP 1250. Design capacity 1312 feet per minute. One (1) EB curing station and one (1) platemaking operation. (Emission Point E-EB-VSOP-1)
272-06-C	08/31/2006	One (1) Dupont RAPIDBAG flexography platemaker model TD4260. (Emission Point E-WTR-DPPM)

Permit No.	Issue Date	Description
34754-12-C (Not Constructed)	04/30/2012 (Not Constructed)	One (1) 3,300 lb/hr Davis Standard extrusion laminator installed in 2005 and one (1) 3,300 lb/hr Starlinger Stacotec extrusion laminator installed in 2012 (Modification of Existing E-WTR-EXT/LAM and Installation of New Extrusion Laminator No. 2 - Project Not Constructed; Rather, New Extrusion Laminator Constructed under Permit No. 34754-12-C(R3) and Existing Extrusion Laminator Not Modified)
C-0193-1004-14	12/16/2014	One (1) Windmoller & Holscher PEAD Bag Machine (Emission Point E-SLV-PEAD).
34754-12-C(R1); 34754-12-C(R2); and 34754-12-C(R3)	3/7/2016 (R3)	One (1) 1,200 lbs/hr (Output) Extrusion Laminator No. 2 (E-WTR-EXT/LAM2), one (1) Slitter/Rewinder (IA-WTR-SLR), and one (1) PrintJet Maxima Ink Jet Printer (IA-WTR-PRNT). [Note, Permit 34754-12-C(R2) was issued to update typing errors found in Permit 34754-12-C(R1) after its issuance, and 34754-12-C(R3) was issued as a construction permit renewal with major source avoidance limits changed for Source not to be subject to APCD STAR Program per Source's formal request of 01/15/2016.]

8. Emission Summary:

Pollutant	District Calculated Actual Emissions (tpy) 2009Data	Pollutant that triggered Major Source Status (based on PTE)
CO	1.506	No
NO _x	1.793	No
PM/PM ₁₀	0.136	No
VOC	33.34	Yes
Total HAPs	0.1126	Yes
Single HAP Glycol Ether	0.107	Yes
Greenhouse Gas	-	-

9. Applicable Requirements:

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

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

11. Referenced Federal Regulations in Permit: None

II. Regulatory Analysis

1. **Acid Rain Requirements:** Mondi Bags USA, 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. Mondi Bags USA, LLC does not manufacture, sell, or distribute any of the chemicals listed in Title VI of the CAAA. 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):** Mondi Bags USA, 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. **Basis of Regulation Applicability**

Regulation	Basis for Applicability
2.17	Federally Enforceable District Origin Operating Permits
6.18	Regulation 6.18 applies to each cold cleaners, open top vapor degreasers, and conveyORIZED degreasers that use volatile organic compounds (VOCs) to remove soluble impurities from metal surfaces.
6.29	Regulation 6.29 applies to each printing line for packaging rotogravure, publication rotogravure, specialty rotogravure, or flexographic printing.
7.08	Regulation 7.08 establishes emission standards for processes that emit PM which were constructed after September 1, 1976.
7.12	Regulation 7.12 applies to each storage vessel for volatile organic compounds that commences construction or modification on or after April 19, 1972
7.25	Regulation 7.25 establishes VOC standards for affected facilities constructed after June 13, 1979.
5.00	Regulation 5.00 defines which sources can be exempt from the STAR Program

a. **Plant-wide**

Mondi Bags USA, LLC. is a potential major source for the pollutant VOC, Single HAP, and Total HAP. 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 pollutants VOC < 25 tn/yr, Total HAPs <12.5 tn/yr, and Single HAP < 5 tn/yr, to be a FEDOOP STAR Exempt sourced as defined by Regulation 5.00, section 1.13.5. The source is not major for Greenhouse Gases.

The source is subject to a plant-wide VOC limit of less than 25 tons during any consecutive 12-month period.

The source is subject to a plant-wide combined HAP limit of less than 12.5 tons during any consecutive 12-month period and individual HAP limit of less than 5 tons during any consecutive 12-month period.

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 –Storage Tanks

i. Equipment:

EU	Emission Point¹	Description Make/Model	Applicable Regulation	Control Device
	E-SLV-STK	One (1) 8000 Gallon N-Propyl Acetate Storage Tank with Submerged Fill	7.12	NA
	E-WTR-AT1	One (1) 6300 Gallon VOC Storage Tank with Bottom Fill		
	E-WTR-AT2	One (1) 6300 Gallon VOC Storage Tank with Bottom Fill		
	E-WTR-AT3	One (1) 6300 Gallon VOC Storage Tank with Bottom Fill		

¹ All emission points in this emission unit are insignificant activities.

ii. **Standards/Operating Limits**

1) **VOC**

Regulation 7.12, sections 3 and 4 establish the requirements to install, maintain, and operate the applicable storage tanks.

c. **Emission Unit U2 – W&H Press, Solvent Wash Station and PEAD Bag Machine**

i. **Equipment:**

EU	Emission Point	Description Make/Model	Applicable Regulation	Control Device
U2	E-SLV-W&H	Stellaflex 8L Flexographic Press, make Windmoeller & Hoelscher	6.29	C-SLV-TCO Thermal Catalytic Oxidizer (TCO) or NA
	E-SLV-SWS	One (1) solvent wash station consisting of a 300 gallon solvent wash up tank and related cleaning equipment for the cleaning of various press parts	6.29	C-SLV-TCO Thermal Catalytic Oxidizer (TCO) or NA
	E-WTR-PRT WSH	Two (2) Parts Washers (W&H Press Room and Maintenance Shop)	6.18	C-SLV-TCO or NA (W&H Press Room Parts Washer) and N/A (Maintenance Shop Parts Washer)
	E-SLV-PEAD	Windmoeller & Holscher PEAD Bag Machine	7.25	C-SLV-TCO Thermal Catalytic Oxidizer (TCO) or NA

ii. **Standards/Operating Limits**

1) **VOC**

(a) As per Regulation 7.25, section 3.1 and the BACT Analysis submitted by the source, the VOC emissions from Emission Point E-SLV-PEAD shall not exceed the 15.0 tpy.

(b) Regulation 6.18 provides for the control of emissions

from solvent metal cleaning equipment.

- (c) Regulation 6.29 establishes VOC content limits for various inks and solvents.

d. **Emission Unit U3** – Extrusion Laminator, Lithographic VSOP Printing Press, Platemaker and Extrusion Laminator No. 2

i. **Equipment:**

EU	Emission Point	Description Make/Model	Applicable Regulation	Control Device
U3	E-WTR-EXT/LAM	Extrusion Laminator No. 1, 1100 lb/hr	7.08 and 7.25	NA
	E-EB-VSOP-1	One (1) Offset Lithography Printing Press, Drent Goebel Model VSOP 1250, Design capacity 1312 feet per minute, including One (1) EB Curing Station and Platemaking Operation	7.25	
	E-WTR-DPPM	DuPont™ RAPIDBAG Flexography Platemaker	7.25	
	E-WTR-EXT/LAM2	One (1) 1,200 lbs/hr (Output) Extrusion Laminator No. 2	7.08 and 7.25	
	IA-WTR-SLR	Slitter/Rewinder (Associated with Bag Forming Line)	7.08	
	IA-WTR-PRNT	PrintJet Maxima Ink Jet Printer (Associated with Bag Forming Line)	7.25	

ii. **Standards/Operating Limits**

1) **VOC**

Regulation 7.25, section 3.1 and the BACT Analysis submitted by the source, the VOC emissions are limited.

2) **PM**

- (a) For emission points subject to Regulation 7.08 for PM, the PM emission standards are calculated per section 3.1.2 and 3.2. The equation to calculate the hourly PM emission limit $E = 3.59 * P^{0.62}$, where E is the allowable lb/hr PM emission limit and P is the process weight rate expressed in tons/hr.

- (b) A one-time PM compliance demonstration has been performed and the lb/hr standard cannot be exceeded uncontrolled. Therefore, there are no monitoring, record keeping, and reporting requirements with

respect to Regulation 7.08 PM lb/hr emission limits.

3) **Opacity**

Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%.

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. **Alternative Operating Scenarios:** The source did not request to operate under any alternative operating scenarios.

5. **Compliance History:**

There are no records of any violations of the terms of the present, prior construction, or operating permits.

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

The emission calculations are based upon VOC and HAP content of the materials used. To calculate HAPs substitute HAP content for VOC content in the following equations. Emissions may be based on actual emissions, potential emissions, or a combination thereof.

Storage tanks can be calculated according to TANKs, potential, equations listed in AP-42, Chapter 7.1 (standing storage and working loss emissions), or another methodology approved in writing by the District.

Flexographic Printing:

$$\text{Flexographic}_{\text{VOC}} = (\text{Ink}_{\text{VOC}}) + (\text{Ink Additive}_{\text{VOC}}) + (\text{Cleaner}_{\text{VOC}})$$

$$\text{Ink}_{\text{VOC(ton)}} = [(\text{Ink used (lbs/month)} \times (\text{Weight Percent Ink VOC Content (\% Expressed as a Decimal)}) \times \left(\frac{1 \text{ ton}}{2000 \text{ lb}}\right) \times (1 - \text{Control Efficiency, if Applicable})]$$

$$\text{Ink Additive}_{\text{VOC(ton)}} = [(\text{Ink Additive used (lbs/month)} \times (\text{Weight Percent Ink Additive VOC content (\% Expressed as a Decimal)}) \times \left(\frac{1 \text{ ton}}{2000 \text{ lb}}\right) \times (1 - \text{Control Efficiency, if Applicable})]$$

$$\text{Cleaner}_{\text{VOC}} = \left[\left(\text{Cleaner} \left(\frac{\text{lbs}}{\text{month}} \right) \right) \times \left(\frac{\text{Weight Percent Cleaner VOC content (\% Expressed as a Decimal)}}{\text{(\% Expressed as a Decimal)}} \right) \right] \times \left(\frac{1 \text{ ton}}{2000 \text{ lb}} \right) \times (1 - \text{Control Efficiency, if Applicable})]$$

Wash Station:

$$\text{Wash}_{\text{VOC}} = \left[\left(\text{Solvent used} \left(\frac{\text{gal}}{\text{month}} \right) \right) \times \left(\text{Density} \left(\frac{\text{lb}}{\text{gal}} \right) \right) \times (\text{VOC content} (\%)) \times \left(1 \frac{\text{ton}}{2000} \text{lb} \right) \times (1 - \text{Control Efficiency, if Applicable}) \right]$$

E-SLV-PEAD:

$$\text{Adhesive}_{\text{VOC}} = (\text{Material Usage Amount}) \times (\text{Wt \% VOC}) \times (1 - \text{Control Efficiency, if Applicable})$$

Laminators E-WTR-EXT/LAM and E-WTR-EXT/LAM2:

$$E_{\text{VOC}(\text{ton/month})} = [(\text{lbs polymer output} (\text{lb/month})) \times (\text{Emission Factor } 59.4 \text{ lbs VOC/MM lbs polymer}) \times (1 \text{ ton}/2000 \text{ lb})]$$

Off-set Lithography EB Press:

$$E_{\text{VOC}} = [(I_{\text{VOC}})(I_{\text{Ret}}) + (FS_{\text{VOC}}) + (BW_{\text{VOC}}) + (RW_{\text{VOC}}) + (C_{\text{VOC}}) + ((CS_{\text{VOC}})(R))(1 \text{ ton}/2000 \text{ lb})]$$

$$E_{\text{VOC}} = \text{tons VOC Emissions}$$

$$I_{\text{VOC}} = \text{lb of EB ink used/month} \times \text{weight \% VOC in each ink}$$

$$I_{\text{Ret}} = 0.050 (1 - \text{District-Approved } 95\% \text{ Capture of Ink on Printed Substrate for Lithographic Presses}) (\text{Optional Credit Not Required to Be Taken; If Not Taken, } I_{\text{Ret}} = 1)$$

$$FS_{\text{VOC}} = \text{Qty of fountain solution used (gallons/month)} \times \text{VOC content of fountain solution as applied (lb/gal)}$$

$$BW_{\text{VOC}} = \text{Qty of blanket wash used (gallons/month)} \times \text{VOC content of blanket wash as applied (lb/gal)}$$

$$RW_{\text{VOC}} = \text{Qty of roller wash used (gallons/month)} \times \text{VOC content of roller wash as applied (lb/gal)}$$

$$C_{\text{VOC}} = \text{Qty of coatings used (gallons/month)} \times \text{VOC content of coating as applied (lb/gal)}$$

$$CS_{\text{VOC}} = \text{Qty of each cleanup solvent used (gallons/month)} \times \text{VOC content as applied (lb/gal)}$$

$$R = 1.00 \text{ or } 0.50 (\text{Fraction of cleanup solvent unrecovered}) (\text{Optional Credit Not Required to Be Taken; If Not Taken, } R = 1)$$

7. Insignificant Activities

Equipment	Quantity	PTE (tpy)	Regulation Basis
Combustion Sources < 10 MMBtu/hr Natural Gas (C-SLV-TCO Natural Gas Burners)	2 @ 7.52 MMBtu/hr each	3.35 NOx	Regulation 1.02, Appendix A section 1.1
Cooling Towers (Non-Chromium Treated Water)	2	0.88 PM	Regulation 1.02, section 1.38.1.2.1
Soil or Groundwater Contamination Remediation Projects – Passive or Total Removal of the Contaminated	As Required/ Needed	NA	Regulation 1.02, Appendix A section 3.20

2 These 2 TCP burners are subject to Regulation 7.06, but they cannot exceed the standard, therefore there are no compliance monitoring and recordkeeping requirements, and no reporting requirements, associated with them.

Equipment	Quantity	PTE (tpy)	Regulation Basis
Substrate for Disposal in a Certified Landfill			
On-Site Laboratory ventilating and exhausting systems which are not used for radioactive air contaminants	1	On-Site Quality Laboratory	Regulation 1.02, Appendix A section 3.11
Emission Unit U1 Storage Tanks E-SLV-STK; E-WTR-AT1; E-WTR-AT2; and E-WTR-AT3	4	0.01 VOC each	Regulation 1.02

- 1) Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements.
- 2) Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements.
- 3) The owner or operator shall annually submit an updated list of insignificant activities that occurred during the preceding year, with the compliance certification due April 15th.
- 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 may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions, or use Potential to Emit (PTE) as the annual emissions for each piece of equipment.
- 6) The District has determined 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) unit.
- 7) The following equipment that does not emit air pollutants: There are no compliance monitoring and recordkeeping requirements, and no reporting requirements, for any of these below equipment items, which are considered “trivial activities: for air permitting purposes:

Source-Wide Activities Not Otherwise Regulated³		
Equipment	Manufacturer	Model
Polytex Tuber with Associated Chiller	W&H	4590
Polytex Tuber Chiller (Closed System; Non-Ammonia and Non-VOC)	AEC	PSA-5

³ This table is for informational purposes only.

Source-Wide Activities Not Otherwise Regulated³		
Equipment	Manufacturer	Model
Sacotex Sewer#1	W&H	4587/1
Sacotec Sewer #2	W&H	4587/2
Sacotec Sewer #3	W&H	4587/3
MultiKon Sewer #4	Starlinger	N/A
Sewer #434	Strong Robinette	Z0007
Pinch Ender	Mid America	CS 200/162
Corna Treaters (9)	N/A	N/A
Brazing, soldering or welding equipment (2) – Maintenance Activity	N/A	N/A
Equipment commonly used in wood-working operations, except for conveying, hogging or burning of sawdust or wood waste – Maintenance Activity	N/A	N/A
Blast cleaning equipment using a suspension of abrasives in water – Maintenance Activity	N/A	N/A
Combustion Sources < 10 MMBtu/hr Natural Gas: 2 @ 0.00015 MM Btu/hr Each, and 1 @ 0.0003 MMBtu/hr (Natural Gas Space Heaters Owned and Operated by Mondri)	N/A	N/A
Internal Combustion Engines (Fixed or Mobile) and Vehicles Used for Transport of Passengers or Freight	N/A	N/A
Maintenance Painting	N/A	N/A
Non-VOC De-Greasing Tank (1 Tank)	N/A	N/A
Machine Shop Maintenance Lathes and Drill Presses (Various)	N/A	N/A
Air Conditioner Units (Personal Comfort) - Less than 50 lbs Refrigerant (Various)	N/A	N/A
Air Compressors (Various)	N/A	N/A
Electrical Transformer Coolants - Non-PCB (Various)	N/A	N/A
Non-Hazardous/Hazardous Waste Drum Storage Area (1 Storage Area)	N/A	N/A
Miscellaneous Drums and Totes (Various)	N/A	N/A
Chillers (Closed Systems) (Various)	N/A	N/A
Nitrogen Tank (1 Closed Pressure Tank)	N/A	N/A
Digital Imager IA-WTR-CDI	Cyrel	N/A